B & K Components Limited

AVR 707™

Home Theater Receiver

Owner's Manual

SIMPLY BETTER!

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Warranty

USER MANUAL - AVR 705 and AVR 707

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No equipment may be returned to B&K Components Ltd. without a RETURN AUTHORIZATION (RA). Should you find it necessary to return equipment to B&K, for any reason, a RETURN AUTHORIZATION (RA) number must be issued by B&K in respect to the equipment being returned. You may request an RA number by calling B&K at the numbers below. We will need the following information to issue your RA number. Please have it ready before you call.

1. Your name, address, and phone number.
2. The model and serial number of the equipment being returned.
3. A description of the problem being experienced.
4. Your sales receipt.

Your call will be referred to a Technical Service Representative who will work with you to resolve the problem. If it is determined that the unit must be returned for repair, an RA number will be issued.

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Safety Precautions

Warning

To prevent fire or shock hazard, do not expose this unit to rain or moisture. Care should be taken to prevent objects or liquid from entering the enclosure. Never handle the power cord with wet hands.

- The lightning flash with arrowhead within a triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may constitute a risk of electric shock to you.
- The exclamation point within a triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.
- Caution: To prevent the risk of electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.
- If an outdoor antenna is installed, be sure it is grounded to provide some protection against voltage surges and built up static charges. Keep outdoor antennas away from power lines.
- Unplug the receiver from the AC outlet when plugging in or unplugging cables, when left unused for an extended period of time, when moving the receiver, or when you suspect lightning in your area.
- Prevent damage to the power cord. Replace the power cord if it becomes damaged in any way. Always grasp the plug on the power cord when plugging or unplugging the receiver from the AC outlet.
- Your system may produce sound levels capable of causing permanent hearing loss. Do not operate for extended periods of time at high volume levels.
- Protect the receiver from impact and place the receiver on a level surface.
- The receiver is equipped with raised feet to provide ventilation, reduce acoustic feedback, and protect against scratching the surface the unit is resting on. B&K advises against removing the feet.
- Do not stack anything on top of the receiver (processor, source, etc.) **Leave a minimum of 3"** clearance from above the top of the receiver.
- The receiver should be located away from sources sensitive to heat.
- Do not perform any internal modifications to the receiver.
- Always connect the receiver's power cord to a dedicated AC outlet for normal operation.
- If young children are present, adult supervision should be provided until the children are capable of following all rules for safe operation.
- Mistaking CONTROL OUTPUT or IR INPUT connectors for audio/video inputs or outputs may damage your receiver or other components.
- It is recommended that the system speaker impedance seen by the amplifier channels of the receiver not fall below 4 ohms. Best amplifier thermal stability is achieved when the it operates into a 4 ohms or greater speaker load. The nominal impedance of most home speakers range between 4 and 8 ohms. Two 8 ohm speakers in parallel is equal to a 4 ohm (system impedance).

The receiver should be serviced by qualified personnel when:

A. The receiver is not functioning properly.
B. Objects have entered the chassis.
C. The receiver was exposed to rain or any other type of moisture.
D. The receiver was dropped, or the chassis is damaged.

The Heart & Soul of your A/V System!

B & K's AVR 707, our new state-of-the-art Home Theater Receiver. The AVR 707 is easy to use, great sounding and delivers crystal clear high definition video to your home theater. Simple to set-up and easy to use, the AVR 707 provides a level of sophistication and ease of use that is unparalleled in the industry. Today's cutting edge technologies and performance, all at the touch of a button. Dolby Digital, DTS and B & K's proprietary multi-channel stereo and surround modes deliver the best audio formats to you, with detail, clarity, and tremendous bass and treble response. The AVR 707, state-of-the-art today and upgradable tomorrow.

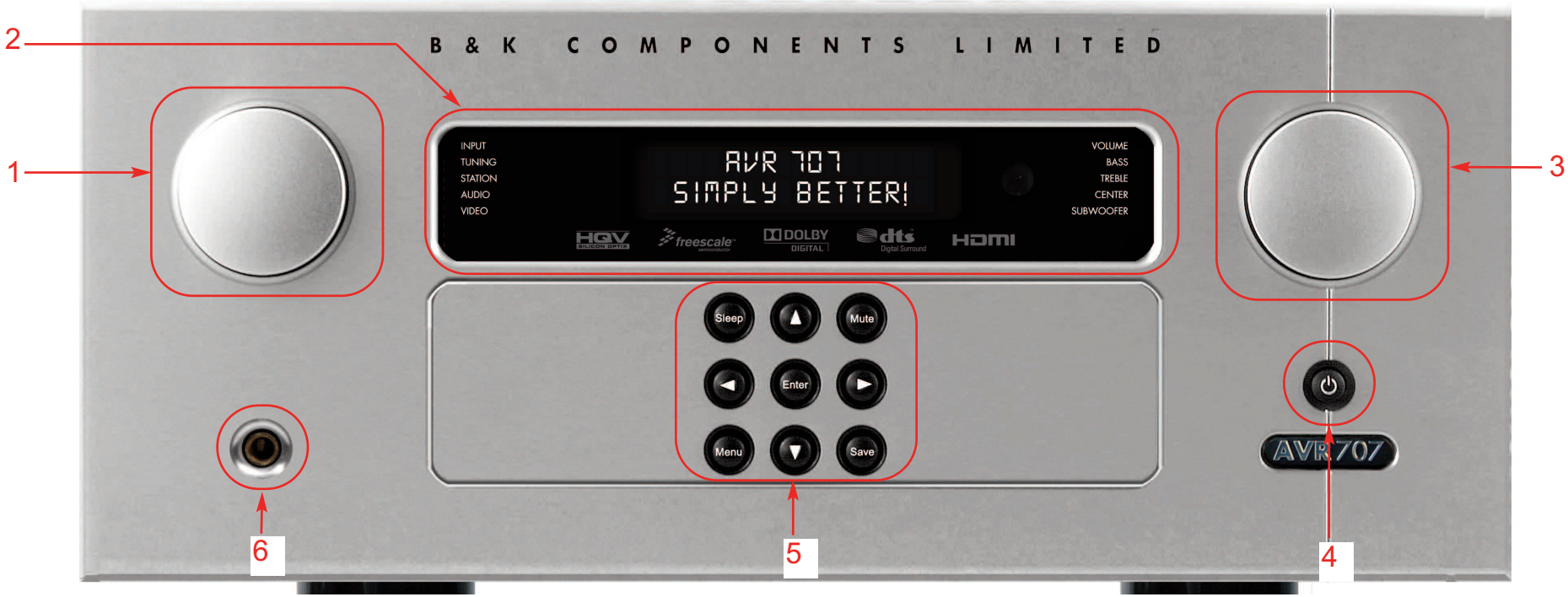
B & K's AVR 707 performance is based upon combining our in-house design expertise with that of our engineering partners at Freescale Semiconductor and Silicon Optix. The AVR 707 uses Freescale's latest audio processor and combines it with Silicon Optix's hi-performance video processor, the Reon HQV Processor, together we give you true video scaling up to 1080p with a musical performance to match. Sit back, relax and let the AVR 707 transport you to the theater or concert.

The all new AVR 707, an elegant yet functional European front panel design combined with the best nuts and bolts can-do American design, engineering and manufacturing expertise. The AVR 707 has a fully loaded rear panel with 14 discrete Audio & Video Inputs, including 6 HDMI Inputs (HDMI 1.3b), 7.1 RCA surround outputs and seven 125 watt amplifier channels. Combine all these connections with our state-of-the-art technology inside the AVR 707 and you get pristine sound and picture quality unprecedented in the industry. Cutting edge technologies from our design partners combined with B & K's legendary design, engineering and manufacturing expertise make the AVR 707 "Simply Better".

AVR 707 Features

- 14 Discrete Audio & Video Inputs
- 1 AES / EBU Digital Audio (XLR) Input
- 8 Analog Audio Inputs (excluding 5.1 or 7.1 inputs)
- 1 Balanced Audio (XLR) Input
- 1 Multi Channel Analog 5.1 or 7.1 Input for analog DVD Audio / Dolby TrueHD / DTS-HD Master Audio
- 16 Digital Audio Inputs (8 Optical / 8 Coax Digital)
- 8 Component / Composite / S-Video Inputs and 2 Component Monitor Outputs
- 6 HDMI Inputs (HDMI 1.3b) with support for Multi-channel PCM and SACD
  Dolby TrueHD / DTS-HD Master Audio Decoding (future upgrade)
- 1 HDMI Output (HDMI 1.3b)
- 8 Unbalanced (RCA) Outputs
- 8 balanced (XLR) Outputs
- True upscaling of HDMI, Component, Composite and S-Video Inputs up-to 1080p over HDMI and Component (1080i max)
- CinemaScope Scaling for 2.35 Aspect Ratio Screen Support (additional Cinema Lens Required)
- 1 1/8” mini-jack 12VDC Control Port
- 1 1/8” mini-jack 12VDC Amp Enable
- B&K’s GUI On-Screen Interface with Overlays up to 1080p via HDMI and Component (1080i max)
- Full 2-Way RS-232 / Ethernet Serial Setup, Command and Control
- Software Upgrade Capability
- Built-In 14 Source Discrete IR Routing
- Built-In AM/FM Tuner with Simple Tuner Preset Stations
- New *Smart Sync* B&K Programmable Audio and Video Preferences
- USB 2.0 interface (future upgrade)

AVR 707 Front Panel



1. **Left Hand Knob -** The left selector knob is a rotary encoder with the primary purpose of A/V input source selection. The knob serves multiple functions. Pushing in on the the knob will scroll through the options to control or select Input Source, AM/FM Tuning, AM/FM Station, Audio Preference or Video Preference. Rotating the knob will change the highlighted function.

2. **Display -** The receiver contains a 16 character by 2 row display. It will indicate current status of the receiver and any changes being performed.

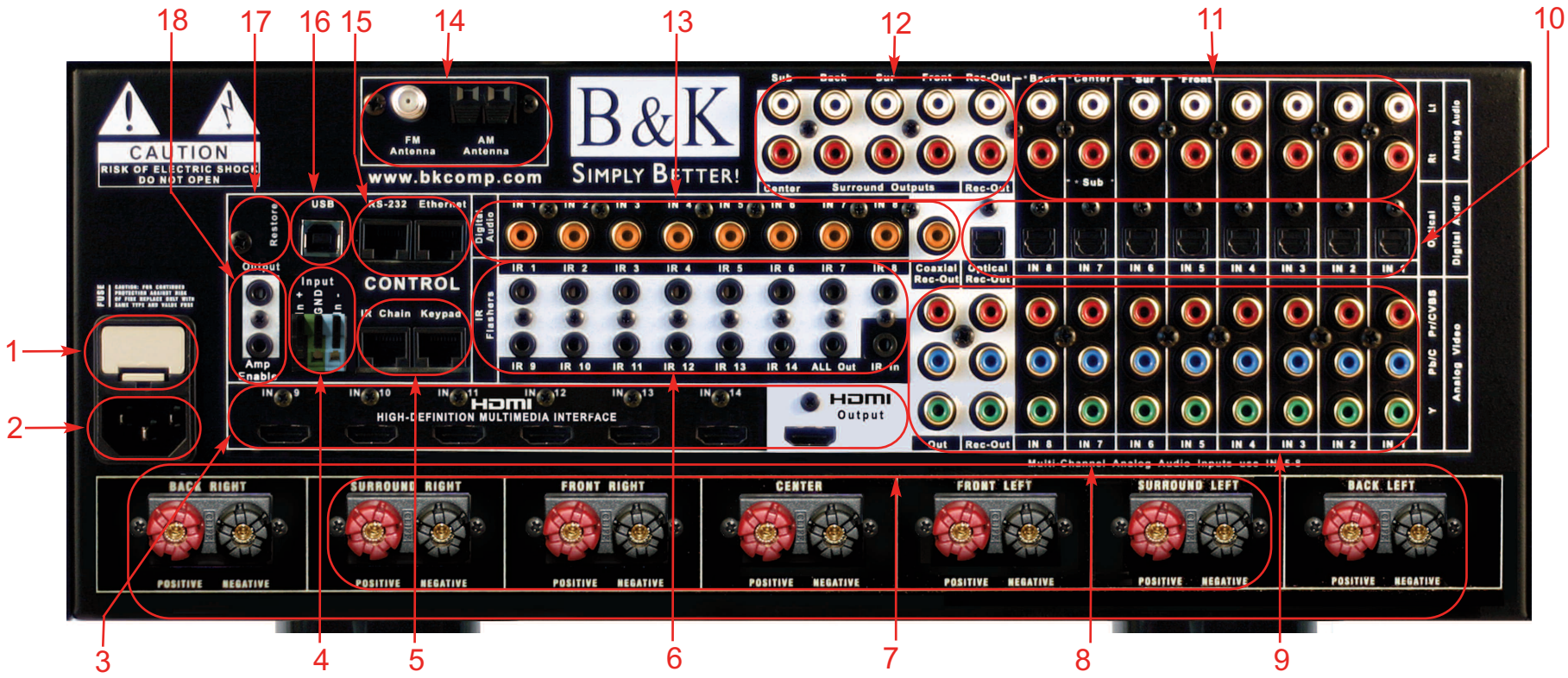
3. **Right Hand Knob -** The right selector knob is a rotary encoder with the primary purpose of audio volume adjustment. The knob serves multiple functions. Pushing in on the the knob will scroll through the options to control Master Volume, Bass, Treble, Center Volume or Subwoofer Volume. Rotating the knob allows changing of the highlighted function.

4. **Main power switch -** Removes all power to the receiver. Normal operation of the receiver requires the power switch to remain on. Use the SLEEP button for daily on and off of the receiver. SLEEP places the unit in standby mode, which allows turning back on with the remote control. Turn the receiver off using the Main Power switch when the receiver is not used for extended periods of time or when connecting or disconnecting hardware connections.

5. **Front panel buttons -** Front panel buttons serve the following functions:
   - **Sleep** - Toggles the unit in and out of standby mode (ON or OFF).
   - **Mute** - Toggles the units volume in and out of the mute state (ON or OFF).
   - **Menu** - Press to enter in and out of the menu system.
   - **Save** - Save the selected setting such as a Preference or Menu option.
   - **Enter** - Pressing allows selection of the desired function while in the menu system. Additionally used for Recall and Save operations.
   - **Arrows** - Left, Right, Up and Down arrows allow navigation through the menu system.

6. **Headphone Jack -** Headphones having a standard 1/4” (6.3mm) stereo plug may be connected to the headphone output.

AVR 707 Rear Panel



1. **AC Fuse Holder -** Holds the AC line fuse. Replace only with same type and value 2A fast blow. Note: The voltage rating label is located on the AC fuse holder cover plate.

2. **AC Input Receptacle -** For attaching the supplied AC power cord to the unit.

3. **HDMI Inputs/Output -** 6 input and 1 output High Definition Multimedia Interface (HDMI) connections. Connections carry both the digital audio and digital video signal simultaneously with output resolutions of 720p, 1080i or 1080p - default set to 1080i.

4. **Three-position Phoenix Adapter -** Phoenix connection for using a Page / Event system with the receiver.

5. **Keypad Connection and IR Daisy Chaining -** RJ-45 Keypad Connection provides a 12VDC power, common ground, RS-232 transmit, IR Data IN, and 12V control output trigger. The receiver will support up to 5 daisy-chained B&K keypads. The IR Chain connection allows linking the receiver to a CT product for full two-way communication.

6. **IR Flashers, All IR Output and IR In -** 1/8" Mini-Jack (Tip + Ring -) connections for IR routing. Flasher outputs allow routing of up to 14 source components. All IR Output will direct all IR information being received by the unit from the Keypad input, front panel or the 1/8" Mini-Jack IR input. IR Input allows an IR signal to be sent into the unit in order to control the receiver or for routed pass-thru control of a connected source component.

AVR 707 Rear Panel

7. **AVR 705 Speaker Outputs -** 5-Way binding posts supply power to the Front, Surround and Center channel speakers.

8. **AVR 707 Speaker Outputs -** 5-Way binding posts supply power to the Front, Surround, Center and Back channel speakers.

9. **Component Video Inputs -** A total of 8 component video inputs for standard and high definition video signals. Composite video directly connects to the red RCA. S-Video is Y - green RCA, C - blue RCA using supplied S-VIDEO to RCA adapter.
   Component Video Outputs - Scaled video output may be set to 720p, 1080i - default set to 1080i.

10. **Digital Optical Audio Inputs -** A total of 8 optical digital audio inputs for connecting optical digital audio signals from the source to the receiver.
    Digital Optical Audio Output - A single optical digital audio output for use with another audio device. The audio output is currently sourced from the selected audio input.

11. **RCA Analog Audio Inputs -** A total of 8 stereo analog RCA inputs for use as standard input pairs. Optional Multi-Channel analog support for use with inputs 5-7 (5.1), 5-8 (7.1). Configuration may be set and viewed using the menu or BKcSuite.
    RCA Analog Record Output - A stereo pair of analog RCA outputs for use with an analog recording device.

12. **RCA Surround Outputs -** 7.1 Surround outputs for driving external power amplifiers or powered speakers.

13. **Coax Digital Audio Inputs -** A total of 8 coax digital audio inputs for connecting coax digital audio signals from the source to the receiver.
    Coax Digital Audio Output - A single coax digital audio output for use with another audio device. The audio output is currently sourced from the selected audio input.

14. **FM/AM Tuner -** Respective connections for attaching the included AM and FM tuner antennas for internal tuner reception.

15. **RS-232 Control Port -** RS-232 RJ-45 input/output for computer interface and RS-232 serial controller applications.
    Ethernet Control Port - Ethernet RJ-45 input for flashing the software in the receiver. Also used for computer interface and Ethernet control applications.

16. **USB 2.0 -** USB 2.0 connection for use of configuring and controlling the receiver. *Feature is not enabled at this time. Please see www.bkcomp.com for updates, when available.*

17. **Restore -** Sometimes it is advisable to restore the unit to a factory default state in order to clear problematic system operation. A factory restore will clear all system settings, Audio and Video Preferences and Serial Macros. Restore may be selected by simultaneously pressing the front panel Sleep, Up and Right Encoder Knob [Master Volume]. A*lternately, pushing in the rear panel button for 5 seconds will restore all settings to factory default. Feature is not enabled at this time. Please see www.bkcomp.com for updates, when available.*

18. **Control Output -** 1/8” Mono Mini-jack (Tip+ Ring -) source of 12VDC 100mA output for controlling external devices, such as amplifiers and projection screens. A remote control CTRL+ "Control On" command will turn on 12VDC and “CTRL-” will turn off 12VDC. Additional control and control is available using RS-232 and Ethernet BKC-DIP.
    Amp Enable - 1/8” Mono Mini-jack (Tip+ Ring -) source of 12VDC 100mA for use with automatically controlling an external device while not in sleep.

Quick Start Considerations

Your B&K receiver is pre-programmed for ease of operation right out of the box. In general, there is minimal setup required to start using your new A/V receiver. To quickly setup and begin operating your receiver, follow these quick steps:

1 Start with all AC power cords unplugged from their designated AC outlet.
2 From each source device, connect the A/V cables to the appropriate A/V SOURCE INPUTS on the receiver's back panel.
3 Connect the speaker cables from the receiver's SPEAKER OUTPUTS to the appropriate speakers.
4 Connect the appropriate video cables from the receiver's video OUTPUTS to the video monitor's input(s).
5 Plug each AC power cord into its designated AC outlet.
6 Turn on all A/V sources. Turn on the main power switch on the front of each unit. Press the ON/SLEEP button on the front panel of the receiver, or the ON button of the remote.
7 Select a source using the front panel source control of the receiver or with the SR10.1 remote control.

The rest of this manual will give further insight into the many aspects of your new receiver. Some additional installation considerations should be noted as follows:

- It is important that your electronic equipment be located where there is proper ventilation. Failure to ventilate your receiver could result in erratic operation and possible failure caused by overheating. A minimum of 3" clearance should be maintained above the receiver. Do not place items directly on top of the receiver. Do not place flammable items on, around or near the A/V equipment (Curtains, paper, etc.).

- B&K supports various software programs that are able to aide in the setup process of the receiver/ preamplifier, SR10.1 remote and CK1.2 Keypad. This software is available online at B&K's website at www.bkcomp.com or by request from B&K's customer service. The setup software is easy to use and is intended to simplify the setup process of your new B&K products.

- Configure a system diagram of all components that are to be connected into the system. The receiver has a total of 14 Audio and Video inputs. The back panel is labeled In 1 to In 8 for Component Video, S-Video, Composite Video, Analog Audio Left + Right Inputs, Digital Coaxial and Digital Optical sources, in most cases it is possible to connect any source to any input. HDMI inputs are labeled In 9 to In 14. You may assign Audio Inputs, In 1 through In 8(Analog or Digital) to a HDMI Video Input. You may not assign the HDMI Audio to Video Inputs, In 1 through In 8. The source name by default is set to In1, In 2, In 3 etc... The Inputs may be renamed in the Menu to reflect the source name, ex. *In 9 may be change to Blu-Ray*. The renamed source input name will appear on the receiver's front panel and the OSD (On Screen Display). The source input name on the remote or keypad may be relabeled to match the source equipment that is being used.

- Determine the type of cable that is needed. Keep in mind that the quality of the cabling that is used may make a difference in the overall audio and video quality. Try to keep interconnecting cable runs as short as possible. When routing cables between equipment, be sure to keep AC cables separate from audio cables. It is a good idea to bundle like cables together to keep interference (noise) to a minimum.

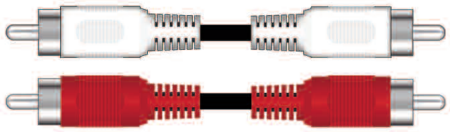
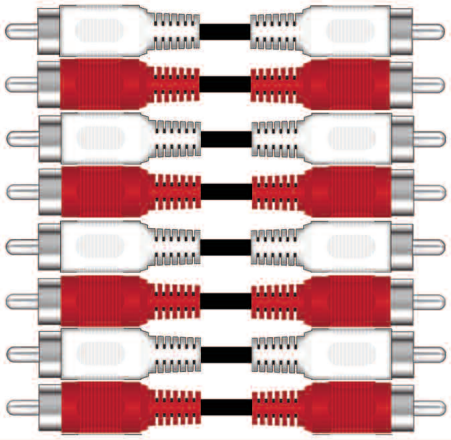
- It is a good idea to label each cable with a name or number at both ends when allocating each cable. Have all the cables you need before you begin the installation because it is inconvenient to run to the store when you are excited to hear what the system will sound like.

- Plan enough cable length and space to allow future access to the back panel.

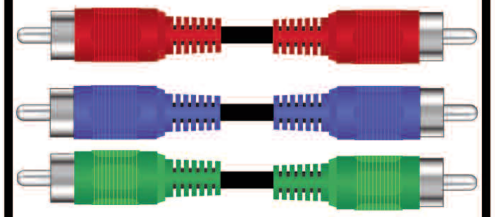
- For best tuner reception, make sure the antenna is several feet away from the receiver and any other equipment that may produce high frequency interference such as personal computers, CD players, halogen lamps, etc.

- For best performance it is recommended that a dedicated AC power line or supply be used. If the equipment is installed in a rack, be sure to insulate the equipment from the rack itself.

Connection Overview

Cable		Jack	Description
HDMI			HDMI Connections can carry uncompressed standard or High Definition digital video and audio and offers the best picture and sound quality.
Optical Digital Audio			The offers the best sound quality and allows a Dolby Digital and DTS signal to be sent. The audio quality is the same as for coaxial.
Coaxial Digital Audio			This offers the best sound quality and allows a Dolby Digital and DTS signal to be sent. The audio quality is the same as for optical.The “ORANGE” RCA connector represents the Digital Coax Connection.
Balanced (XLR)			This cable carries analog audio. Balanced XLR cables are used for better noise reduction and longer cable runs.
Analog Audio			This cable carries analog audio. It is the most common connection format for analog audio and can be found on almost all AV components.The “White” RCA connector represents the Left analog audio input and the “RED” is the right.
Multi-Channel Analog Audio			This cable carries multichannel analog audio and is typically used to connect players with a 7.1 channel analog audio output. Several standard analog RCA audio cables can be used. These inputs can also be used for a 5.1 signal source. State the RCA Input usage for Multi-Channel Analog. IN 5 is Front L/R, IN 6 is Surround L/R, IN 7 is Center/Sub, IN 8 is Back L/R. Please see the following pages for more information.

Video Connections

Cable		Jack	Description
HDMI			HDMI is an Audio and Video interface that carries an uncompressed digital bitstream. HDMI can carry HD video and up to 8 channels of uncompressed audio.
Component			Component video is analog video information that is separated into three different signals. The type on the Ref 70 is R-Y, B-Y and Y (Also known as YUV) sent over three video cables. Y (Green RCA)is the luminance channel, R-Y (Red RCA) is the red component minus the luminance information and B-Y (Blue RCA) is the blue component minus the luminance information.
S-Video			S-Video is a standard that uses separate conductors for the luminance (Y) and chrominance (C) information resulting in better video quality. S-Video is the Blue and Green RCA's of the Component Video Connections
Composite			Composite video is the oldest standard for color video. It combines the luminance (brightness or black-and-white) and chrominance (color) information onto a signal conductor. Composite is the Red RCA of the Component Video Connections

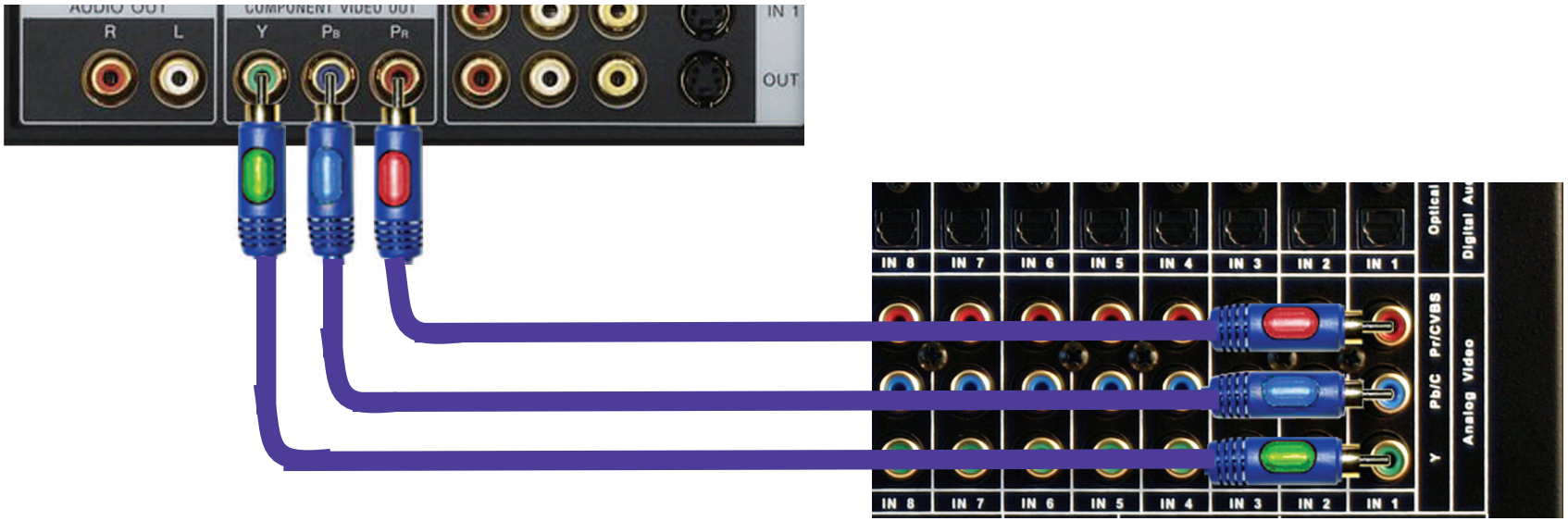
Video Inputs - Hardware Connections

Video Input Connection - HDMI

The B&K surround receiver provides 6 HDMI A/V inputs. *HDMI carries both audio and video, B&K allows options to process audio and video separately (please see the menu setup for further options)*. To connect an HDMI video source to the B&K, connect the HDMI cable to the HDMI output on the source piece. Then connect the other end of the cable into the corresponding HDMI input on the receiver. Shown is an HDMI output on the source piece going into Input 9 on the B&K.

Video Input Connection - Component Video

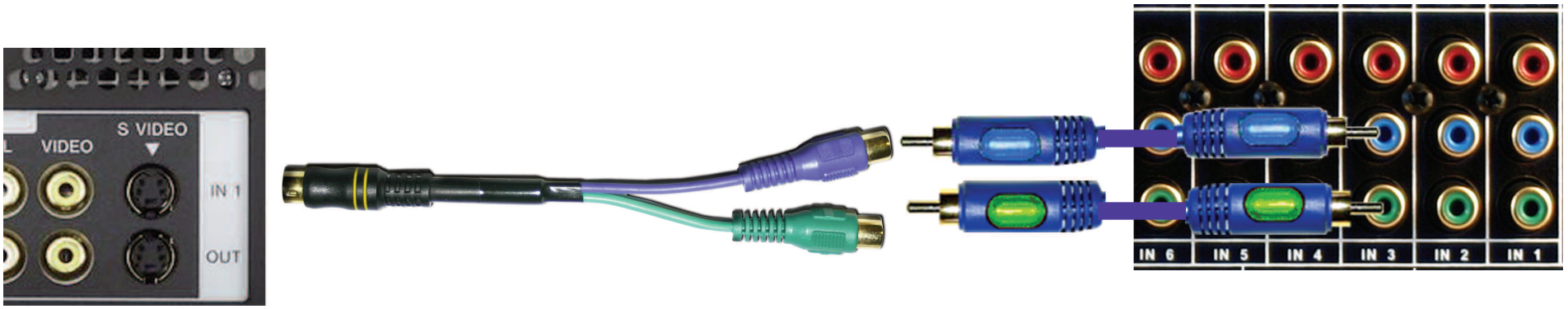
The B&K surround receiver provides eight sets of component video inputs. Each component input corresponds to a set of stereo analog inputs, optical digital inputs and coax digital inputs. For example, Component video input 8 would correspond to Analog Stereo input 8, Optical digital input 8 and Coax digital input 8. Shown above is a component video source going into Input 8 on the B&K.



Video Inputs - Hardware Connections

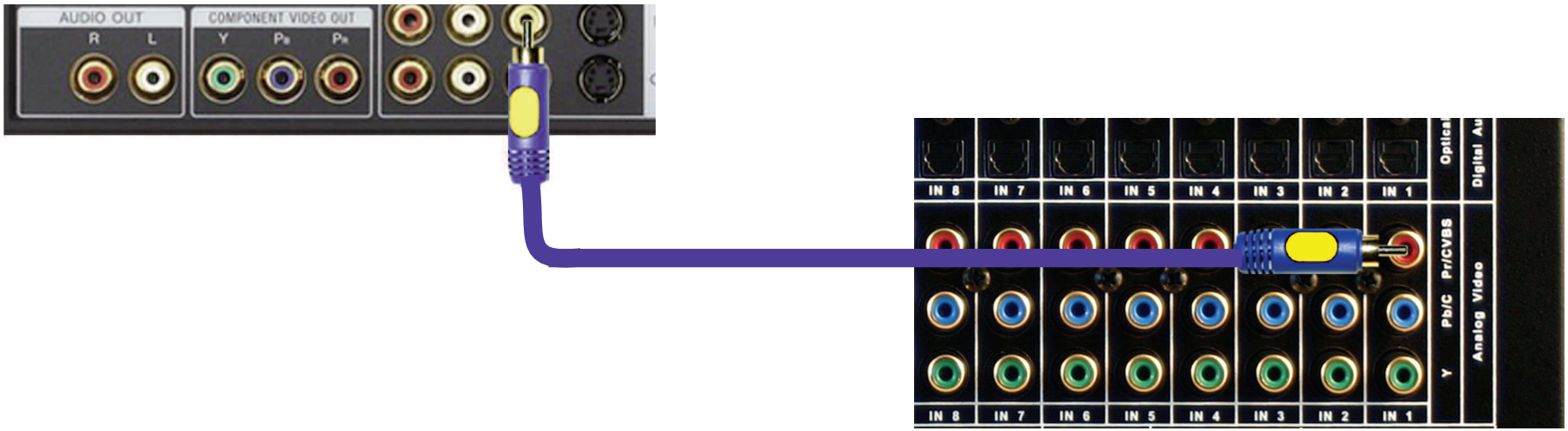
Video Input Connection - S-Video

The B&K surround receiver provides eight sets of component video inputs. These inputs may be used with the S-Video to RCA adapter that is supplied with the receiver in order to up-convert an S-Video signal to go into the component input. Connect the one end of the S-Video to RCA adapter to the S-Video output on the source piece. Then connect RCA cables from the adapter to the corresponding colored inputs on the B&K. Shown is an S-Video source connected to the S-Video to RCA adapter with RCA connections going into the blue (C) and green (Y) RCA inputs of Input 3.



Video Input Connection - Composite Video

The B&K surround receiver provides eight sets of component video inputs. These inputs may be used to up-convert a composite video signal to go into the component input. Connect the composite video output on the source piece using an RCA cable to the red colored input on the B&K. Shown is a composite video source with an RCA connection going into the red RCA input of Input 1.

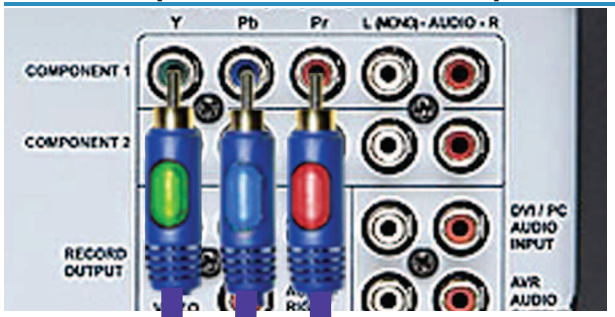


Video Outputs - Hardware Connections

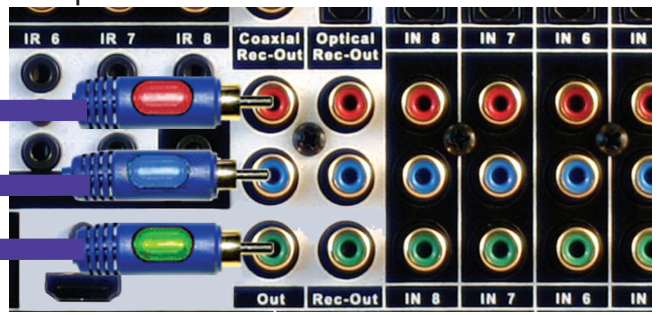
Video Output Connection - HDMI

The HDMI output connection on the receiver carries High Definition video to your television or monitor. To connect an HDMI video output from the B&K, connect the HDMI cable to the HDMI output on the B&K. Then connect the other end of the cable into the corresponding HDMI input on your television or monitor. Shown is the HDMI output on the B&K going to the HDMI input on a monitor.

Video Output Connection - Component Video



The component video output connection on the receiver carries High Definition video to your television or monitor. To connect an component video output from the B&K, connect the three RCA component video cables to the corresponding component video outputs on the B&K. Then connect the other ends of the cables into the corresponding component video inputs on your television or monitor. Shown is the component video output on the B&K going to the component video input on a monitor.



Video Output Connection - Component Video Record Output

The component video record output connection on the receiver standardly carries High Definition video. However, for use with recording purposes, B&K supports Component, Composite or S-Video on this output. While set to RECORD OUT, any selected video source on the receiver is scaled to Composite or S-Video as set under System Video setup. Note: The system setup menu will NOT be displayed on the this output during record mode operation. *During standard video processing, the only video outputs available are HDMI and/or Component video. If your monitor or television does not have support for these connections, please contact your local authorized B&K dealer.*

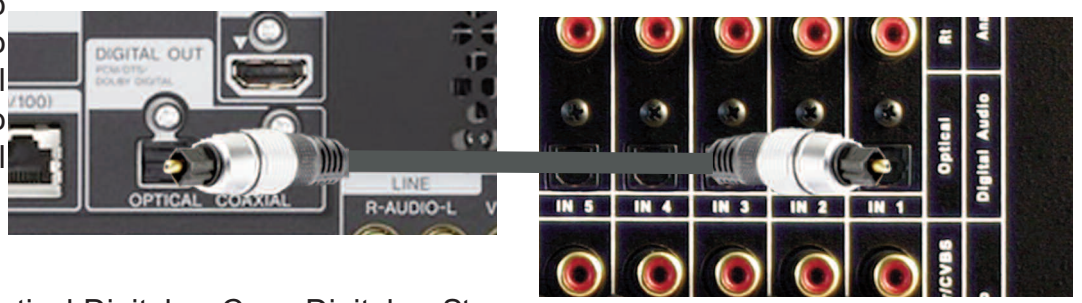
Audio Inputs - Hardware Connections

Audio Input Connection - HDMI

Although HDMI connection carries both audio and video, B&K can process audio and video separately (please see the menu structure for further information). To connect an HDMI audio source to the B&K, connect the HDMI cable to the HDMI output on the source device. Then connect the other end of the cable into the corresponding HDMI input on the receiver. Multi-channel PCM over HDMI operation is supported by selecting the DVD-A on the remote control.

Audio Input Connection - Optical Digital

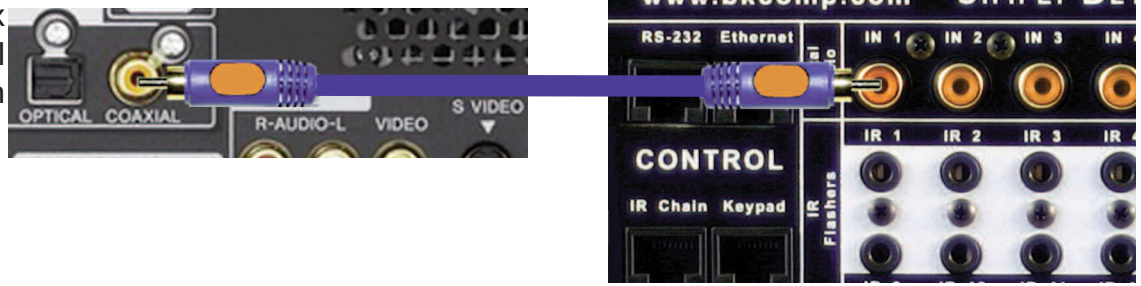
The B&K surround receiver provides eight optical audio inputs. These inputs may be used to send an optical audio signal from a source piece to the B&K. Connect the optical audio output on the source piece using an optical cable to the optical audio input on the B&K. Shown is an optical audio source going into the optical audio input on Input 1.



The order of audio signal precedence per each input is Optical Digital -> Coax Digital -> Stereo Analog.

Audio Input Connection - Coax Digital

The B&K surround receiver provides eight coax digital audio inputs. These inputs may be used to send a coax digital audio signal from a source piece to the B&K. Connect the coax digital audio output on the source piece using an RCA cable to the coax digital audio input on the B&K. Shown is a coax digital audio source going into the coax digital audio input on Input 1.



The order of audio signal precedence per each input is Optical Digital -> Coax Digital -> Stereo Analog.

Audio Inputs - Hardware Connections

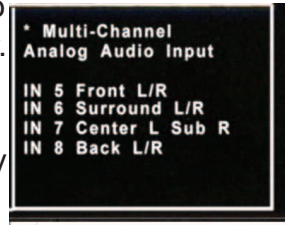
Audio Input Connection - Stereo Analog

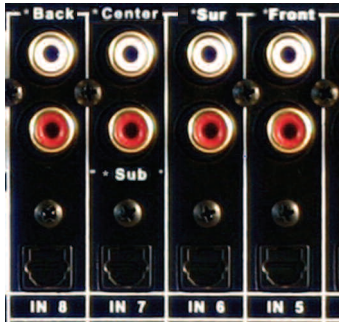
The B&K surround receiver provides eight pairs of stereo analog audio inputs. These inputs may be used to send a stereo analog audio signal from a source piece to the B&K. Connect the stereo analog audio output on the source piece using a RCA cable to the analog stereo audio input on the B&K. Shown is a stereo analog audio source going into the stereo analog audio input on Input 1. Analog input 5,6,7,8 may be assigned for use as a single multi-channel analog input. See Multi-channel Analog 5.1 or 7.1 below.

The order of audio signal precedence per each input is Optical Digital -> Coax Digital -> Stereo Analog.

Audio Input Connection - Multi-channel Analog 5.1 or 7.1

Multi-channel Analog is available from players such as a Blu-Ray-Ray player, SACD player, DVD-Audio player, etc. B&K analog inputs 5,6,7,8 are used as the inputs for a player's 5.1 or 7.1 analog output. The Multi-channel Analog input must be assigned for use with a source input 1 through 14. Assignment is set in Menu - System Settings - Audio - Audio Assignment Section. Additionally the input may be set to work with a 5.1 or 7.1 player. Once set, Multi-channel audio is selected via the DVD-A remote button.





Note: if the Multi-channel Analog input source is assigned to an HDMI input 9-14, only Multi-channel Analog operation is allowed for the specified HDMI input.

Audio Input Connection - Balanced Input

The stereo balanced input carries a balanced analog audio signal from a source piece such as a CD player, etc. The stereo balanced input must be assigned for use to an input source 1 through 14.

Audio Input Connection - AES-EBU Digital

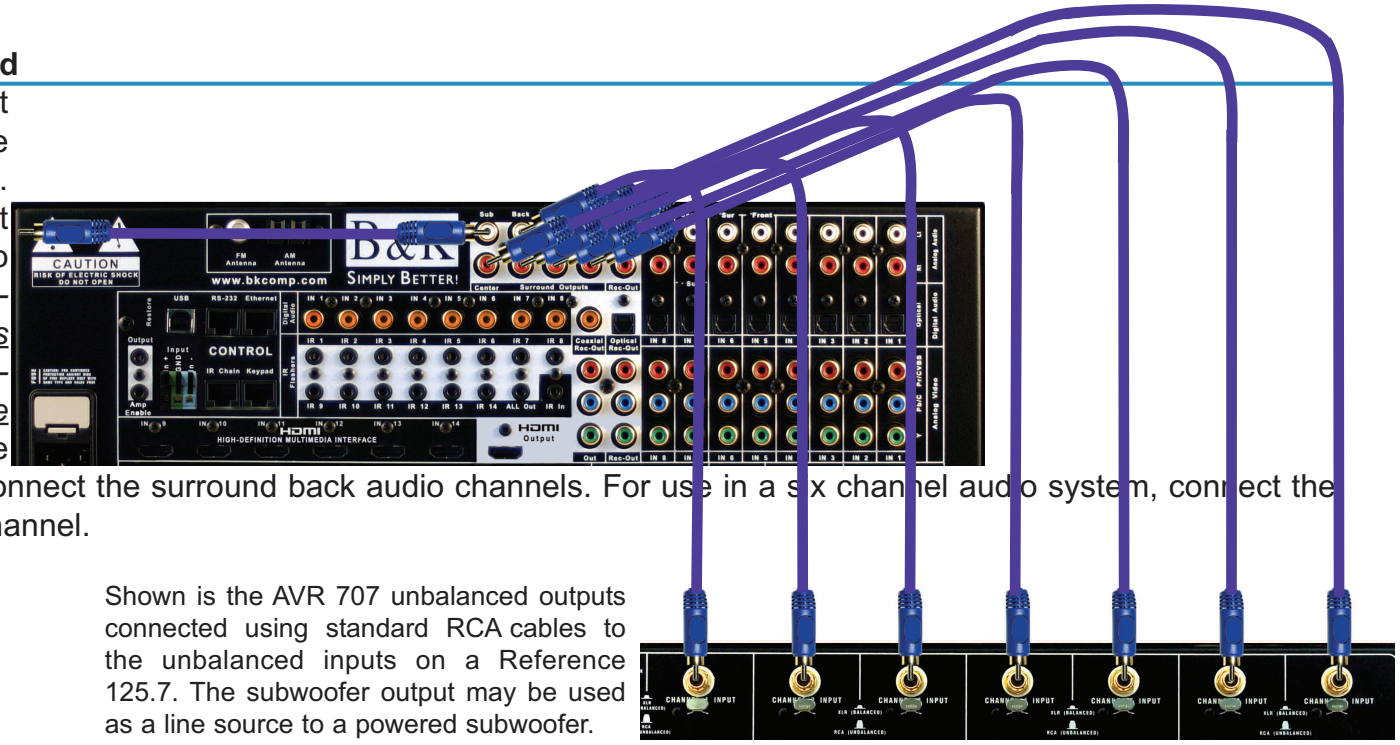
The AES-EBU digital balanced input carries a digital audio signal from a source piece such as a CD player with an AES-EBU output. The AES-EBU input must be assigned for use to an input source 1 through 14.

Audio Output - Hardware Connections

Your B&K receiver has both unbalanced line level RCA surround outputs for use with other external amplifiers and 5-way binding speaker binding posts for use with the 125 watt internal power amplifiers. Both types of outputs connect from the receiver directly to the amplifier in the system or corresponding speaker. When connecting audio cables to the amplifier, be sure to match the labeled output channels to the position of the speaker in the room.

Audio Output Connection - Unbalanced

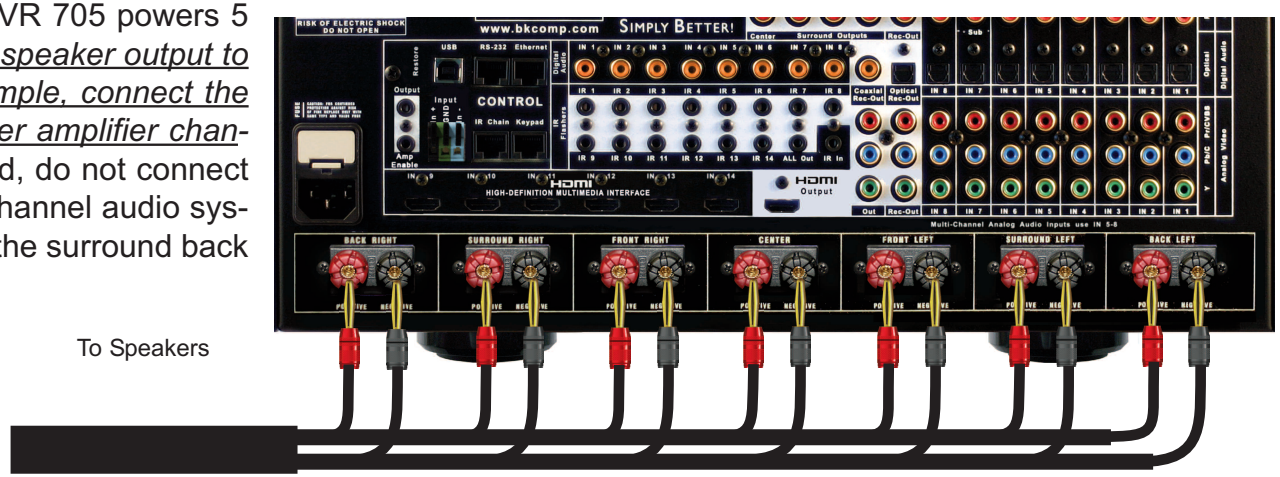
The AVR 707 and 705 receivers support 7.1 RCA surround outputs. Typical usage is for use with other external amplifiers. These outputs may be used to connect external amplifiers and/or a subwoofer to the receiver. *Be sure to match the appropriate pre-amp output to the speakers location in the room. For example, connect the center channel output the the center speaker amplifier channel.* For use in a five channel audio system, do not connect the surround back audio channels. For use in a six channel audio system, connect the sixth channel to the surround back left channel.



Shown is the AVR 707 unbalanced outputs connected using standard RCA cables to the unbalanced inputs on a Reference 125.7. The subwoofer output may be used as a line source to a powered subwoofer.

Audio Output Connection - Speakers

The AVR 707 powers 7 speakers and the AVR 705 powers 5 speakers. *Be sure to match the appropriate speaker output to the speakers location in the room. For example, connect the center channel output the the center speaker amplifier channel.* If a five channel audio system is desired, do not connect the surround back audio channels. If a six channel audio system is desired, connect the sixth channel to the surround back left channel.

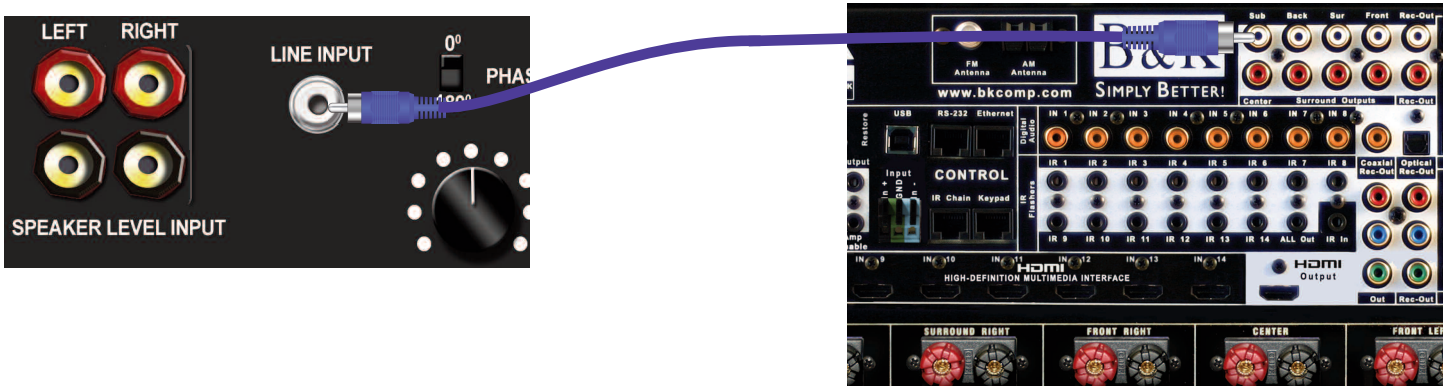


To Speakers

Audio Output - Hardware Connections

Audio Output Connection - Subwoofer

The AVR 707 supplies a single subwoofer unbalanced (RCA) output. Connect the subwoofer output to the input on the subwoofer. The diagram shows how the receiver may be connected to an active subwoofer.



Audio Output Connection - Optical Digital Record

The optical digital output will output the S/PDIF digital signal of the source selected on the receiver. Coax digital inputs are converted to optical and need only connect one or the other. If you wish to record both analog and digital sources you must connect both analog and digital inputs to your recorder.

Audio Output Connection - Coax Digital Record

The coax digital output will output the S/PDIF digital signal of the source selected on the receiver. Optical digital inputs are converted to coaxial and need only connect one or the other. If you wish to record both analog and digital sources you must connect both analog and digital inputs to your recorder.

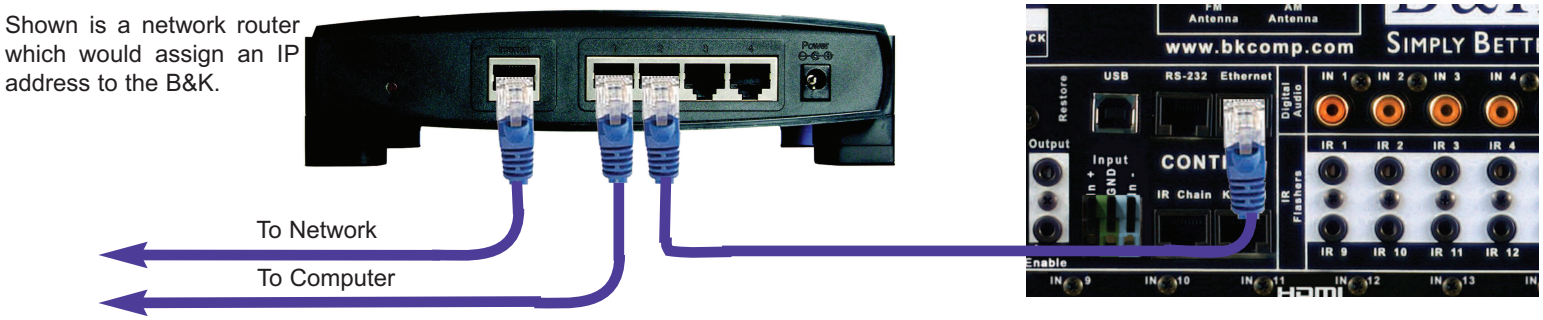
Audio Output Connection - Analog Record

A stereo pair of analog RCA outputs for use with an analog recording device. If you wish to record both analog and digital sources you must connect both analog and digital inputs to your recorder.

Ethernet Communication

Connection Instructions

1 Make sure that all devices are powered off, including the B&K, Router, PCs, switches, etc.
2 Connect one end of an Ethernet network cable to one of the numbered ports on the back of the Router. Connect the other end to the Ethernet port on the B&K. Repeat this step to connect more PCs or other network devices to the Router. Power the router as needed.
3 Connect your cable or DSL modem's Ethernet cable to the Router's Internet port. Power on the cable or DSL modem, B&K product, router, etc.
4 Power on your PC(s). Open the necessary B&K programs and either configure or control the AVR 707.



RS-232 Communication

Plug one end of a RJ-45 terminated straight through CAT-5 cable into the serial communications port on the back of the computer using the serial DB-9 to RJ-45 Adapter. Plug the other end of the RJ-45 terminated cable into the RS-232 I/O port on the Receiver. Once your COM settings are determined, configure the B&K Suite and B&K Editors for simple and easy setup. Note that many modern laptops do not come equipped with a DB-9 style serial port. If your computer only has a USB style serial port, you'll need to obtain a USB to DB-9 Serial port adapter cable.

B&K offers a pre-made connector suitable for connecting a serial port to a standard network CAT-5 cable with RJ-45 connectors. However, if you wish to make your own, please contact B&K Components for the pin connection.

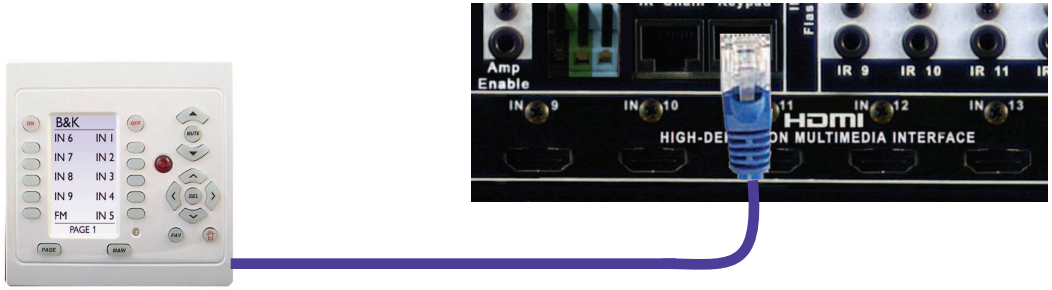
USB Communication

The USB 2.0 connection is for use with computer control of the AVR 707. The port is currently not active at this time. Please select RS-232 or Ethernet for full 2-way computer communication. Please see the B&K website for flash updates and further information.

Keypad / IR - Hardware Connections

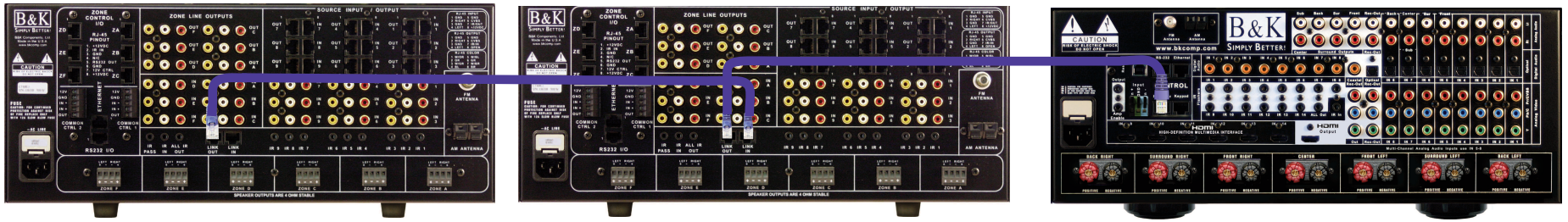
Keypad Connection

The Keypad connection may be used with any CK 1.2, CK 1.1 or CK 2.2 keypads. A keypad would connect using a straight CAT-5 cable as shown. Up to 5 keypads may be daisy-chained from the Keypad Connection on the AVR 707.



IR Chain Connection

The IR chain is used for two way communication with the CT 600.3, 600.1 or 300.3. When linking multiple CT products (see the CT manual) the AVR 707 would be last unit in the chain. Shown are two CT 600.3 linked as follows: Out of 1st CT to In of 2nd CT, Out of 2nd CT to IR Chain of AVR 707.



Flasher Outputs / All IR Output / IR Input

Flasher Outputs - The AVR 707 allows for basic IR routing capabilities. In the AVR 707, IR will route from the keypad terminal, the IR input or the front panel flasher to the IR output for only the input that is selected. For example if Input 1 is selected, the IR information will only come from IR output 1. All connections are 1/8" mono mini-jack (Tip + Ring -).

All IR Output - All IR information coming from the keypad terminal, the IR input or the front panel flasher will be sent to the All IR output. This connection is a 1/8" mono mini-jack (Tip + Ring -).

IR Input - This allows other IR device information to be sent to the AVR 707 from "RF to IR devices... etc". This connection is a 1/8" mono mini-jack (Tip + Ring -).

Control Output / Amp Enable

The Control Out and Amp Enable outputs are standard 1/8” mono mini-jack connections used for triggering such pieces as amplifiers, screens, relays, etc. The output is a 100mA 5-24 VDC signal. The amp enabled output is active when the receiver is taken out of the sleep/standby mode. The control output is active when the IR, RS-232 or Ethernet command is sent to enable the 12VDC signal. It is disabled when the IR, RS-232 or Ethernet command is sent to disable the 12 VDC signal. Shown is the amp enable connection going to the trigger input on an amplifier.

Control Input

One control input trigger is provided that may be used for theater events such as land-line telephone and doorbell notification. The control input trigger on the AVR 707 allows up to 24VAC or DC voltage sensing. Referred to as Page / Events, typical applications might involve a doorbell and front door security camera. For example, when the doorbell is pressed, the AVR 707 could switch to a specific A/V source input connected to a camera. The user may specify the duration and on screen message as part of the Page/Event. Wiring diagrams for specific applications are available through B&K. Please see www.bkcomp.com or contact our Customer Service Department for other specific applications.

AM / FM Antenna

The B&K receiver contains one internal AM/FM tuner. To connect the AM antenna, use the AM antenna connection block and the AM antenna supplied. The AM connector is a ‘push pin type’ connection. Strip 1/4 inch of insulation off your AM antenna wires and insert one wire end into each hole while holding the tabs down. Release the tabs to lock in the AM antenna wires. The FM connection is a standard screw F-type connector. Simply connect the supplied FM dipole antenna to this connection and route the leads for best reception.

Restore

Pushing in the restore button will reset all functions on the AVR 707. *This feature is not active at this time.*

HQV Video Processing

Temporal Noise Reduction

A temporal noise filter takes advantage of the fact that noise is a random element of the image that changes over time. Instead of simply evaluating individual frames, a temporal noise filter evaluates several frames at once. By identifying the differences between two frames and then removing that data from the final image, visible noise can be reduced very effectively. If there are no objects in motion, this is a virtually perfect noise-reduction technique that preserves most of the detail.

However, a problem arises if there are moving objects in the image, which also cause differences from one frame to the next; of course, these differences should be retained. If moving objects are not distinguished from noise, a ghosting or smearing effect is seen.

HQV processing uses a per-pixel motion-adaptive and noise-adaptive temporal filter to avoid the artificial appearance and artifacts associated with conventional noise filters. To preserve maximum detail, moving pixels do not undergo unnecessary noise processing. In static areas, the strength of noise reduction is determined on a per-pixel basis, depending on the level of noise in the surrounding pixels as well as in previous frames, allowing the filter to adapt to the amount of noise in the image at any given time. The end result is a natural-looking picture with minimal noise and grain and maximum preservation of fine details.

Detail Enhancement

Detail enhancement brings out the fine detail in scenes and is important for SD and HD material. For example, it's possible to see blades of grass, small details on jackets, and wrinkles on faces. When combined with noise reduction and advanced scaling, Reon-VX detail enhancement can make regular DVDs approach the quality of high-definition DVDs.

Block Noise Reduction

The goal of Block Noise Reduction is to minimize the very visible square edges around MPEG2 macroblocks caused by HF detail being chucked away within square blocks, leaving just coarse detail (or DC) which emphasizes the block structure. The Block Noise Reduction aims to reduce the visibility of the edges of the blocks when this compression kicks in.

Mosquito Noise Reduction

Satellite and cable providers, as well as PVRs, compress the signal to get the maximum content into the smallest space. Reon-VX delivers high-quality codec (mosquito+block) noise reduction to remove the noise and artifacts caused by this compression.

HQV Video Processing

Chroma Transient Improvement

Color transient improvement enhances color definition providing a natural, life-like image even from SD NTSC sources.

Luma Enhancement

Color video signals such as NTSC, PAL or SECAM types all have luminance (luma) and chrominance (chroma) components. As the luma signal bandwidth is usually larger than the chroma signal bandwidth, luma edges changes occur much faster than chroma edges changes. In other words, a luma signal transition occurs faster than a chroma signal transition. Consequently, luma signal transitions usually appear degraded. With Luma Enhancement, the HQV Processing will enhance the luma signal to give you vibrant video signals with no distracting picture blur.

Aspect Control

Using the power of Reon HQV video processing, the AVR 707 currently provides 5 programmed video aspect ratios for displaying video on a 16x9 monitor.

NONE - video is reproduced with no aspect ratio treatment.

PILLAR BOX - incoming horizontal video size is corrected to allow proper 4x3 image display.

STRETCH - incoming vertical video size is corrected to allow proper 2.35:1 image display.

ZOOM - incoming video is cropped to allow proper display when image contains horizontal and vertical bars.

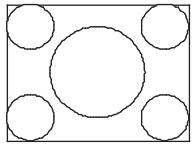
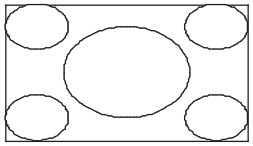
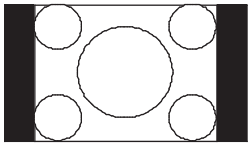
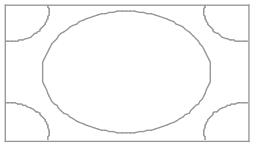
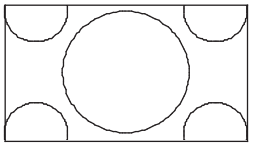
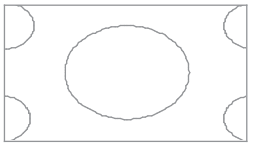
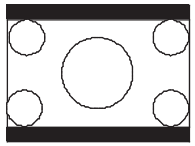
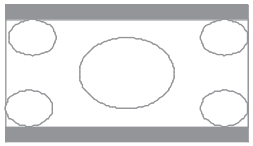
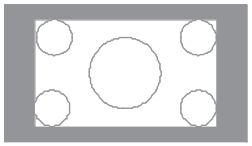
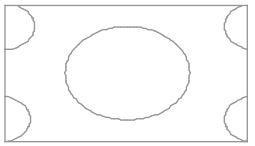
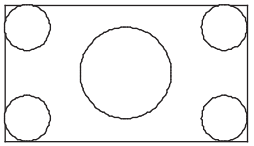
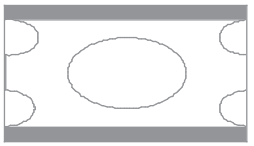
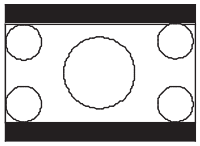
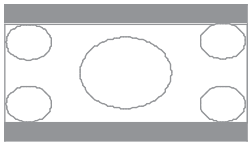
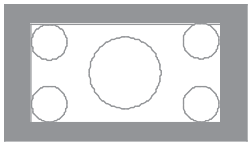
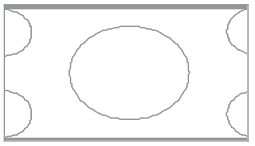
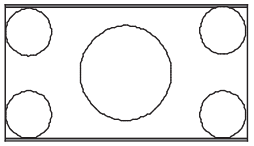
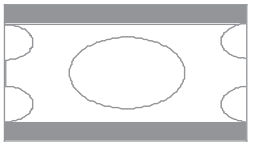
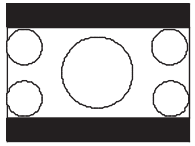
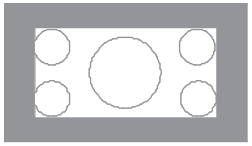
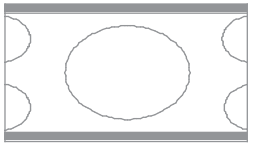
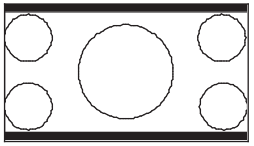
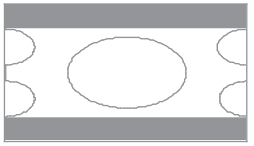
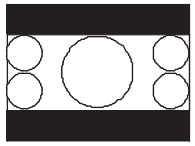
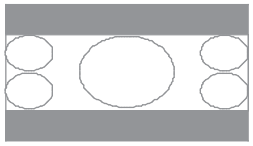
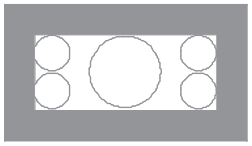
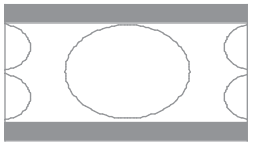
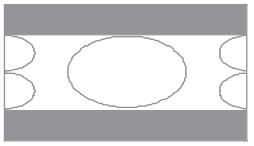
WIDE - incoming video is increased horizontally to allow a 4x3 image to fill a 16x9 screen.

Additional Aspect Adjustemets

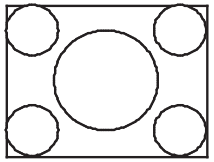
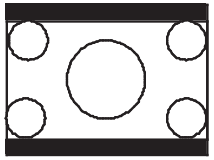
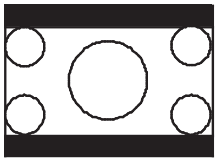
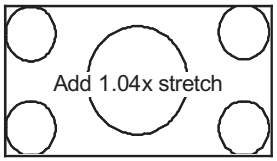
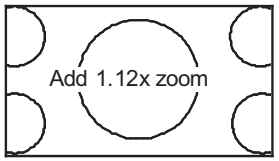
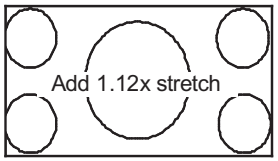
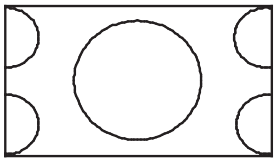
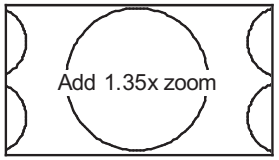
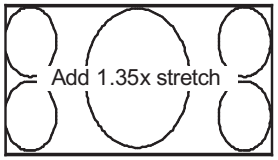
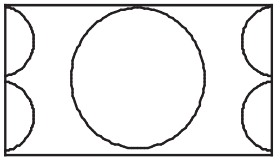
STRETCH +/- incoming video may be increased vertically in 1% increments to eliminate top and bottom black bars.

ZOOM +/- incoming video may be cropped in 1% increments to eliminate top, bottom, left and right black bars.

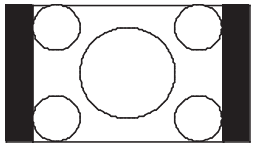
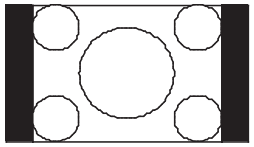
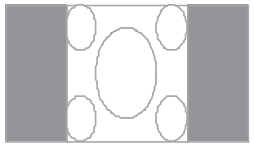
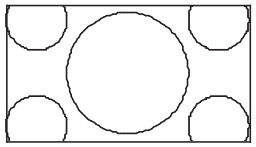
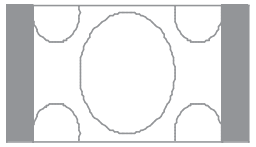
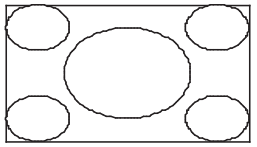
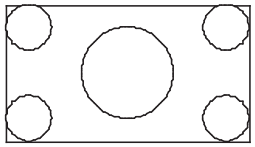
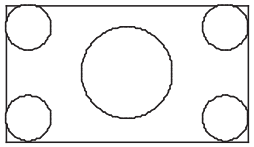
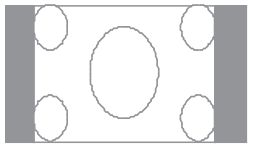
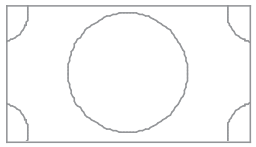
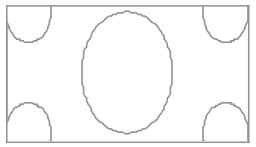
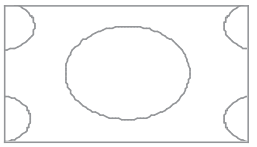
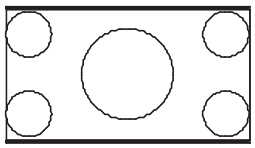
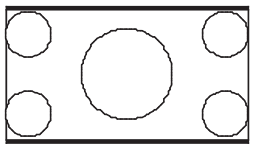
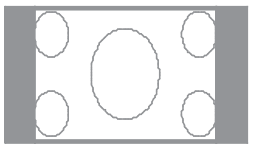
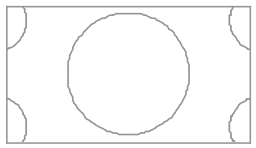
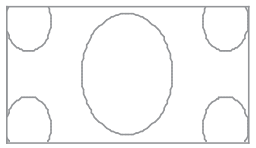
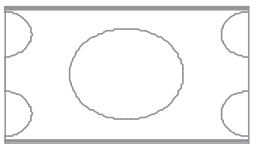
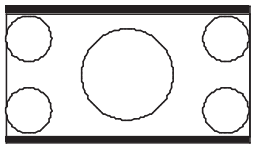
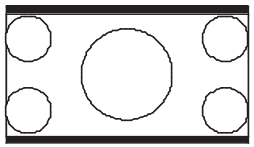
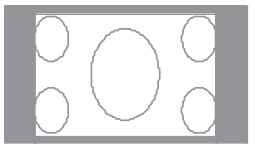
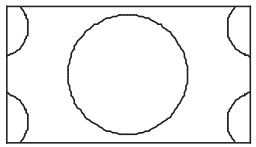
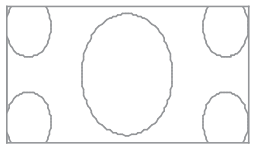
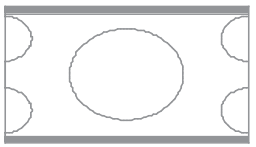
Aspect Ratios 4x3 (1:33:1) Formats on 16x9 (1:78:1) Screen

Input	None	Pillarbox	Zoom	Stretch	Wide
 1.33:1 full screen	 No bars No crop Fat people	 Bars No crop No distortion	 No bars Crop all Fat people	 No bars Crop top and bottom No distortion	 No bars Crop left and right Fatter people
 1.78:1 (16:9) letterbox	 Bars top and bottom No Crop Fat people	 Bars all No crop No distortion	 No bars Crop left and right Fat people	 No bars No crop No distortion	 Bars top and bottom Crop left and right Fatter people
 1.85:1 letterbox	 Bars top and bottom No crop Fat people	 Bars all No crop No distortion	 Bars top and bottom Crop left and right Fat people	 Bars top and bottom No crop No distortion	 Bars top and bottom Crop left right Fatter people
 2:1 letterbox	Bars top and bottom No crop Fat people	 Bars all No crop No distortion	 Bars top and bottom Crop left and right Fat people	 Small bars No crop No distortion	 Bars top and bottom Crop left right Fatter people
 2.35:1 letterbox	 Bars top and bottom No crop Fat people	 Bars all No crop No distortion	 Bars top and bottom Crop left and right Fat people	Bars top and bottom No crop No distortion	 Bars top and bottom Crop left right Fatter people

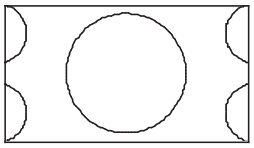
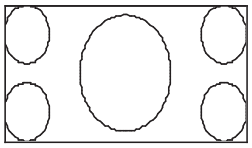
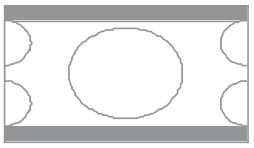
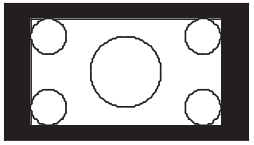
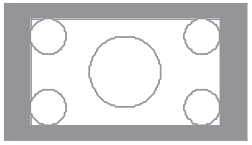
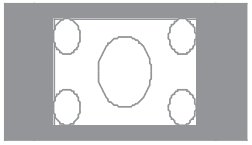
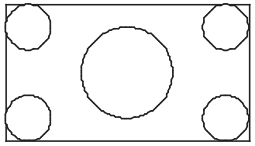
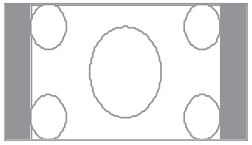
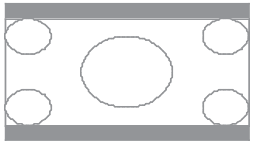
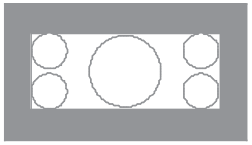
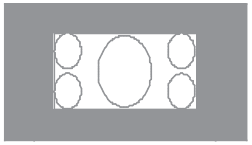
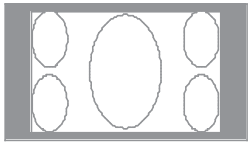
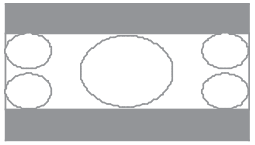
Aspect Ratios Variation 4x3 (1:33:1) Formats on 16x9 (1:78:1) Screen

Input	Variations Stretch Mode + zoom	Variations Stretch Mode + stretch	Variations Stretch Mode + stretch + zoom
 1.33:1 full screen			
 1.78:1 (16:9) letterbox			
 1.85:1 letterbox	 No bars Slight crop No distortion	 No bars No crop Slight skinny	
 2:1 letterbox	 No bars Slight crop No distortion	 No bars No crop Slight skinny	 No bars Slight crop Slight skinny
 2.35:1 letterbox	 No bars Crop No distortion	 No bars No crop Skinny people	 No bars Slight crop Slight skinny

Aspect Ratios 16x9 (1:78:1) Formats on 16x9 (1:78:1) Screen

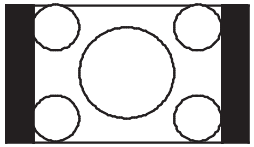
Input	None	Pillarbox	Zoom	Stretch	Wide
 1.33:1 pillarbox	 Bars left and right No crop No distortion	 Bars left and right No crop Skinny people	 No bars Crop top and bottom No distortion	 Bars left and right Crop top and bottom Skinny people	 No bars Crop left and right Fat people
 1.78:1	 No bars No crop No distortion	 Bars left and right No crop Skinny people	 No bars Crop all No distortion	 No bars Crop top and bottom Skinny people	 No bars Crop left and right Fat people
 1.85:1 letterbox	 Bars top and bottom No crop No distortion	 Bars all No crop Skinny people	 No bars Crop left and right No distortion	 No bars Crop top and bottom Skinny people	 Bars top and bottom Crop left and right Fat people
 2:1 letterbox	 Bars top and bottom No crop No distortion	 Bars all No crop Skinny people	 No bars Crop No distortion	 No bars Crop top and bottom Skinny people	 Bars top and bottom Crop left and right Fat people

Aspect Ratios 16x9 (1:78:1) Formats on 16x9 (1:78:1) Screen

Input	None	Pillarbox	Zoom	Stretch	Wide
2.35:1 letterbox	Bars top and bottom No crop No distortion	Bars all No crop Skinny people	 No bars Crop No distortion	 No bars No crop Skinny people	 Bars top and bottom Crop left and right Fat people
 1.78:1 windowbox	 Bars all No crop No distortion	 Bars all No crop Skinny people	 No bars No crop No distortion	 Bars left and right No crop Skinny people	 Bars top and bottom No Crop Fat people
2.35:1 windowbox	 Bars all No crop No distortion	 Bars all No crop Skinny people	Bars top and bottom No crop No distortion	 Bars all No crop Skinny people	 Bars top and bottom No Crop Fat people

Aspect Ratios Variation 16x9 (1:78:1) Formats on 16x9 (1:78:1) Screen

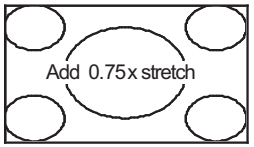
Input



1.33:1 pillarbox

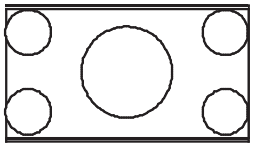
Variations
No mode
+ stretch

Variations
Zoom Mode + stretch

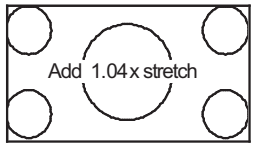


No bars
No crop
Fat people

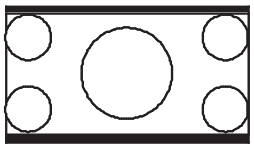
Variations
Stretch Mode
+ stretch
+ zoom



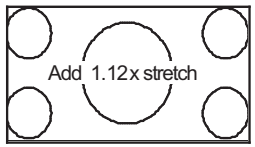
1.85:1 letterbox



No bars
No crop
Slightly skinny people

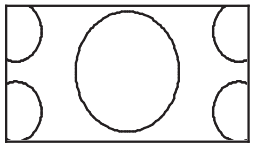


2:1 letterbox



No bars
No crop
Slightly skinny people

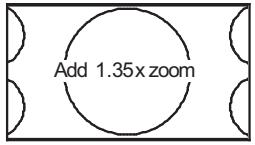
2.35:1 letterbox



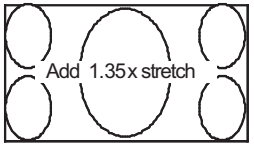
No bars
Slight crop
Slightly skinny people

2.35:1 windowbox

Variations
Zoom mode + zoom

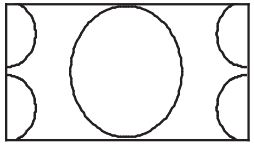


No bars
Crop
No distortion



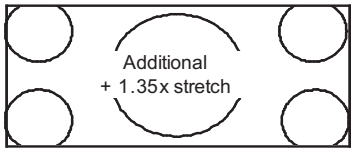
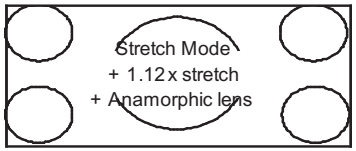
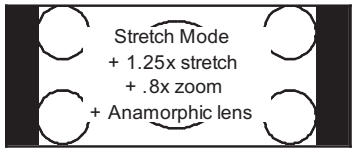
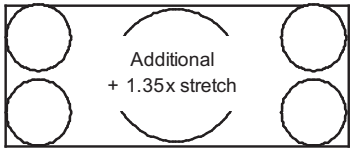
No bars
No crop
Skinny people

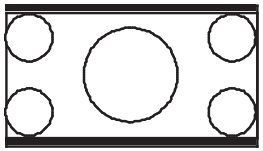
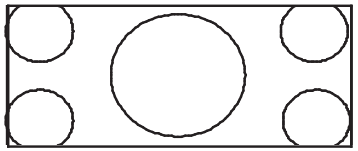
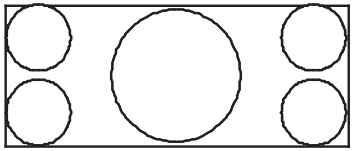
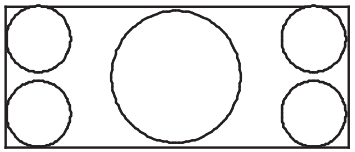
Variations
Zoom mode + zoom + stretch



No bars
Slight Crop
Slightly skinny

Aspect Ratios - 16x9 (1:78:1) Formats on 2:35:1 Screen with Anamorphic Lens

Input	Stretch	Stretch	Stretch
2:1 letterbox	 No bars Slight crop Slightly fat people	 No bars No crop Fat people	 Bars left and right No crop No distortion
2.35:1 letterbox	 No bars No crop No distortion		

		None	None
 2:1 letterbox	 No bars Slight crop Slightly fat people	No bars No crop Fat people	Bars left and right No crop No distortion
2.35:1 letterbox	 No bars No crop No distortion		
2.35:1 windowbox	 No bars No crop No distortion		

SR 10.1 Remote Control Guide

Your B&K receiver is supplied with a state-of-the-art remote control. The SR 10.1 is a computer programmable learning remote. It may be programmed to control any or all of the components in your system using IR. The setup software CD-ROM for the remote is supplied in the box with the SR 10.1 or may be found on the B&K website www.bkcomp.com. **Be sure to perform a Live Update after the software has been installed on your PC.** For instructions on programming the SR 10.1 please see the Programming Manual.

The default program of the remote is setup to control all aspects of the AVR 707. Up to 20 devices may be stored and programmed on the remote. Currently B&K ships the remote with 17 pre-programmed devices for use with 14 source inputs. A definition of the default programming is below.

IN 1: Selects Input 1 on the B&K receiver.

IN 2: Selects Input 2 on the B&K receiver.

IN 3: Selects Input 3 on the B&K receiver.

IN 4: Selects Input 4 on the B&K receiver.

IN 5: Selects Input 5 on the B&K receiver.

IN 6: Selects Input 6 on the B&K receiver.

TUNER: Selects the tuner and jumps to the page with controls for the AM/FM tuner on the B&K receiver.

VIDEO: Jumps to the page with controls for the video processing section of the B&K receiver.

AUDIO: Jumps to the page with controls for the audio processing of the B&K receiver.

Note: Inputs IN 7 - IN 14 are available from Main Page 2.

Each device may be programmed to control the source associated with the input on the B&K receiver. The setup software contains a database of various manufacturer's IR codes for devices such as DVD players, CD players, music servers, TVs and more. IR commands may also be learned directly into the SR 10.1 remote from the original source remote control.

The B&K device buttons at the bottom of the remote display screen contain the IR commands that pertain specifically to the B&K receiver. Once either Audio, Video or Tuner has been selected, press the PAGE button to step through the 4 pages of IR commands for the specific function. Press the MAIN button to return to Main Page 1.

Operation and Control

The following pages outline the normal day-to-day operation of your receiver from the supplied SR10.1 remote control. All unit functions may be directly controlled from the front panel. The SR10.1 remote is capable of controlling both the B&K receiver plus other source gear in your system. This section will outline the usage of the SR10.1 Remote with your B&K receiver. The full programming manual of the SR 10.1 is available on the website. All programming software and product manuals are available online at www.bkcomp.com.

Master Power On / Off

The master power switch located on the front panel of your receiver must be “ON” (pressed in) for the receiver to operate. When this switch is OFF (out) all power is shut off. This will prevent turning it back on with the remote control or keypad. For normal day to day operation, leave the master power switch in the ON position. Use the ON/SLEEP function for daily power on and off. This will allow the receiver to be turned on and off (sleep/standby) from the remote control or keypad.

Whenever turning on the master power switch, you must wait approximately 15 seconds while the receiver restores its internal memory and initializes system parameters. You may want to turn off the master power switch only when your receiver will be idle for extended periods of time or during periods of power line fluctuations. The memory will not be lost while the master power switch is off.

On / Off / Sleep

For normal day to day operation, you will put your receiver in or out of SLEEP (standby) by using the ON (Active) and OFF (Sleep) buttons of the remote control. The Sleep/Standby mode keeps minimal functions running in order to allow the remote control or keypad to quickly power the unit up. Note that the only front panel button that is lit while in sleep is the ON / SLEEP button. All other buttons and display indicators are off while your receiver is in standby. The remote control or keypad has discrete power OFF and ON IR commands to put the receiver in and out of standby mode. The front panel Sleep button is used to toggle the unit in and out of standby. The power on titles will display every time the unit is brought out of sleep mode.

Source Selection

Using the left selector knob ensure the source light on the front panel display is set to source. If not set to source, press the knob repeatedly until the source light is lit. Next, rotate the knob until the front panel LCD shows the desired input, 1 through 14, FM or AM. The inputs may also be selected discretely by using the input commands on the SR 10.1 remote.

Adjusting Volume

The right selector knob is a rotary encoder with the primary purpose of audio volume and EQ adjustment. For volume adjustment, push the knob in the up or down position until the right hand side of the display says volume. Then rotate the knob to the desired volume. Volume ranges from -96dB to +15dB. 0dB is Dolby Reference level.

Adjusting Center / Rear / Subwoofer Level

The right selector knob is a rotary encoder which adjusts volume and equalization. For temporary speaker adjustment, push the knob in the up or down position until either Center, Rear or Subwoofer is highlighted. Then rotate the knob to the desired volume for that specific channel (s). The temporary level may also be adjusted by the SR 10.1 remote, using the CNTR+ / CNTR-, REAR+ / REAR- or SUB+ / SUB- adjustments under the AUDIO device. Temporary level adjustment ranges from -12 to +12.

Adjusting Audio EQ

For selecting a programmed EQ setting by the SR 10.1 remote, from the MAIN PAGE select AUDIO, then use the EQ device button to toggle thru NONE, VARIABLE, CINEMA, VOCAL and LOUDNESS. See Adjusting Audio Bass / Treble for further control.

Adjusting Audio Bass / Treble Equalization

The right selector knob is a rotary encoder which adjusts volume and equalization. For temporary bass or treble equalization adjustment, push the knob in the up or down position until either Bass or Treble is highlighted. Then rotate the knob to the desired setting. The temporary equalization may also be adjusted by the SR 10.1 remote, using the BASS+ / BASS-, TREB+ / TREB- device buttons. Temporary EQ adjustment ranges from -12 to +12. Note: For the Bass / Treble EQ to function the EQ must be set to EQ Variable using the remote control EQ button.

Adjusting Video Brightness

For temporary Brightness adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the BRIT+ / BRIT- device buttons to adjust the amount of video white level. Temporary Brightness adjustment ranges from -50 to +50.

Adjusting Video Contrast

For temporary Contrast adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the CONT+ / CONT- device buttons to adjust the amount of video black white level. Temporary Contrast adjustment ranges from -50 to +50.

Adjusting Video Color

For temporary Color adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the COLR+ / COLR- device buttons to adjust the amount of color level. Temporary Contrast adjustment ranges from -50 to +50.

Adjusting Video Hue

For temporary Hue adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the HUE+ / HUE- device buttons to adjust the amount of color tilt. Temporary Contrast adjustment ranges from -90 to +90.

Adjusting Video Aspect

For selecting a programmed Aspect ratio by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the ASPECT device button to toggle thru NONE, PILLAR BOX, STRETCH, ZOOM, WIDE and adjust the amount of color tilt. alternately, you may directly select Aspects device buttons NONE, PILLR, STRET, ZOOM, WIDE.

Adjusting Video Sharpness

For temporary Sharpness adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the SHRP+ / SHRP- device buttons to adjust the amount of video edge enhancement. Temporary Sharpness adjustment ranges from -50 to +50.

Adjusting Video Stretch

For temporary aspect Stretch adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the STR+ / STR- device buttons to adjust the amount of vertical stretch is applied to the image. Temporary Stretch adjustment ranges from 0 to +33.

Adjusting Video Zoom

For temporary aspect Zoom adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the ZOOM+ / ZOOM- device buttons to adjust the amount of zoom is applied to the image. Temporary Zoom adjustment ranges from 0 to +33.

Adjusting Video Luma Enhancement

Selecting a programmed Luma setting by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the LUM_E device button to toggle thru NONE, CINEMA, VIVID, DARK SCENE, BRIGHT SCENE and GRAPHICS.

Adjusting Video Detail Enhancement

For temporary Detail Enhancement adjustment by the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the DTL+ / DTL- device buttons to adjust the amount of video edge enhancment. Temporary Detail Enhancement adjustment ranges from 0 to +99.

Adjusting Video Temporal Noise Reduction

Selecting a programmed Temporal Noise Reduction setting for use with standard definition processing, using the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the TMPRL device button to toggle thru OFF, LOW, MEDIUM and HIGH.

Adjusting Video Mosquito Noise Reduction

Selecting a programmed Mosquito Noise Reduction setting for use with standard definition processing, using the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the MSQTO device button to toggle thru OFF, LOW, MEDIUM and HIGH.

Adjusting Video Block Noise Reduction

Selecting Block Noise Reduction for use with standard definition processing, using the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the BLOCK device button to toggle OFF, ON.

Adjusting Video Luma Transient Improvement

Selecting Luma Transient Improvement for use with standard definition processing, using the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the LUM_T device button to toggle OFF, LOW, HIGH.

Adjusting Video Chroma Transient Improvement

Selecting Chroma Transient Improvement for use with standard definition processing, using the SR 10.1 remote, from the MAIN PAGE select VIDEO, then use the CROMA device button to toggle OFF, LOW, HIGH.

AM / FM Tuner Operation

All TUNER operations require the receiver source be set to TUNER. Press the FM or AM button on the remote or select AM or FM input using the front panel to access the tuner.

Manual Tuning - From the remote control or the front panel, tap the Tune + / - arrow to tune one frequency step at a time and Seek +/- arrow to automatically seek up or down to the next available strong station. Very strong stations may cause seeking to stop one step away from the station's actual frequency. Check one step above or below if you are not sure. Your favorite stations may then be saved into one of the 40 Tuner Preferences .

Direct Frequency Entry Tuning - To directly recall a tuner frequency, press the FM or AM button on the SR 10.1, then enter the frequency of the station within the next 3 seconds.
Example - Button press steps for directly entering the radio station for 103.3 FM = FM - 1 - 0 - 3 - 3

Headphone Operation

Headphone mode allows output of the source selection using a set of headphones. The headphone jack uses a 1/4" (6.3mm) stereo jack. From the remote control select STEREO 0. SURROUND - 0 is identical to STEREO-0. To select headphone mode from the front panel, select a source, press the MODE button. Press the UP or DOWN arrows to step through until the receiver switches into headphone mode. When in headphone mode, the rear panel 1/8" mini-jack labeled AMP Enable Output may be used to turn off an external power amplifier of subwoofer. This feature allows your receiver to turn off external amplifiers or powered subwoofers with compatible 12VDC CONTROL inputs. The receiver will mute the surround output channels when in headphone mode.

While in 'HEADPHONE', equalization features of the receiver remain operational. The unit will stay in headphone mode until a different speaker selection is made. This feature allows the 'Headphone' selection to stay in effect until the unit is put into sleep.

WARNING: In order to provide full range audio to your headphones, it is necessary that we override the bass management processing in your receiver. If you are using external amplifiers or powered speakers that are not connected to the receivers Amp Enable Output, then full frequency response audio will be sent to your front left and right speakers. If you have small front speakers we strongly suggest you manually turn off your external amplifiers or powered speakers before selecting 'HEADPHONE' operation. Otherwise speaker damage may occur.

Control Out On / Off

For use with 12VDC trigger of an external device via the rear panel 1/8" mini-jack Control Out connector, using the SR 10.1 remote, from the MAIN PAGE select VIDEO, then select the CTRL+ or CTRL- device button to set OFF / ON.

Audio / Video / Tuner Preference Selection

Remote Control - Saving Audio, Video or Tuner Preferences:

1. Set desired Audio, Video, or Tuner state.
2. Depending on the preference type to be saved, press AUD-P (for Audio Preference), VID-P (for Video Preference), or TUNE + / - (for Tuner Preference) on the remote control.
3. Press SAVE.
4. Once the "On Screen" Preference Save message appears, press ENTER to select which preference number to save the setting to.
5. Press DOWN and ENTER to change the Preference name. Press ENTER when desired name is set.
6. Press SAVE.

Front Panel - Pushing in on the the left source control knob will scroll through the options to control or select an Audio or Video preference. Simply rotate the knob to the desired Audio or Video Preference for instant recall.

Front Panel Display Operation

The front panel display is capable of displaying 2 rows by 16 characters each The top row will display the Input selection information and the bottom row would display the Mode and speaker selection. All changes to volume, input, audio mode, etc. will be displayed for a few seconds on the front panel. When no changes are in progress, the front panel will display the input and surround mode. Some abbreviations are necessary and are shown below

Front Panel Display - Abbreviations

4	4 Surround	dts	DTS	DD	Dolby Digital
4B	4 Back	dts ES DSC	DTS Discrete 6.1	Dolby D EX	Dolby Digital Surround EX
5	5 Surround	dts ES MTX	DTS Matrix 6.1	DPLIIx	Dolby Pro Logic IIx
5B	5 Back	NEO:6	DTS NEO:6	Music	Music Mode
Surround	Surround			Movie	Movie Mode

Front Panel Display - Digital Audio Input Status

Digital Multi-channel Bitstreams

The following table represents a visual synopsis of how the front panel will respond depending on the audio mode, number of speakers and audio signal type. It shows how the front panel will display multi-channel digital bitstreams.

# of Speakers Used	Front Panel Display		
	MONO	**STEREO**	**SURROUND**
1	Mono 1	Mono 1	Mono 1
2	Mono 2	STEREO 2	STEREO 2
3	Mono 3	STEREO 3	DD Surround 3 DTS Surround 3
4 Surrounds	Mono 4	STEREO 4	DD Surround 4 DTS Surround 4
4 Backs	Mono 4B	STEREO 4B	DD Surround 4B DTS Surround 4B
5 Surrounds	Mono 5	STEREO 5	DD Surround 5 DTS Surround 5
5 Backs	Mono 5B	STEREO 5B	DD Surround 5B DTS Surround 5B
6	Mono 6	STEREO 6	DD EX Movie 6 DD EX Music 6 DTS ES Movie 6 DTS ES Music 6 DD MTX Movie 6 DD MTX Music 6
7	Mono 7	STEREO 7	DD Surround 7 DTS Surround 7

Front Panel Display - Analog Audio Input Status

Analog, PCM, DD 2.0 Bitstreams

The following table represents a visual synopsis of how the front panel will respond depending on the audio mode, number of speakers and audio signal type.It shows how the front panel will display two channel audio types.

# of Speakers Used	Front Panel Display		
	MONO	STEREO	SURROUND
1	Mono 1	Mono 1	Mono 1
2	Mono 2	STEREO 2	STEREO 2
3	Mono 3	STEREO 3	PLIIx Movie 3 PLIIx Music 3 NEO:6 Movie 3 NEO:6 Music 3
4 Surround	Mono 4	STEREO 4	PLIIx Movie 4 PLIIx Music 4 NEO:6 Movie 4 NEO:6 Music 4
4 Back	Mono 4B	STEREO 4B	PLIIx Movie 4B PLIIx Music 4B NEO:6 Movie 4B NEO:6 Music 4B
5 Surround	Mono 5	STEREO 5	PLIIx Movie 5 PLIIx Music 5 NEO:6 Movie 5 NEO:6 Music 5
5 Back	Mono 5B	STEREO 5B	PLIIx Movie 5B PLIIx Music 5B NEO:6 Movie 5B NEO:6 Music 5B
6	Mono 6	STEREO 6	PLIIx Movie 6 PLIIx Music 6 NEO:6 Movie 6 NEO:6 Music 6
7	Mono 7	STEREO 7	PLIIx Movie 7 PLIIx Music 7 NEO:6 Movie 7 NEO:6 Music 3

Audio Modes and Speaker Selections

B&K incorporates a state-of-the-art software and hardware system that will prioritize the incoming audio signals (Plug n Play) and accordingly select the appropriate number of speakers, two-channel surround decoder (Dolby Pro Logic IIx or DTS NEO:6) or multi-channel surround mode (Movie or Music) depending on the user's preference. Multi-channel encoded bitstreams (DTS and Dolby Digital) are automatically detected and selected for any input. When a Dolby Digital or DTS multi-channel bitstream is detected, the number of speakers in the speaker setup menu are selected automatically. Plug n Play will give priority to digital bitstreams. If there is no multi-channel or two-channel digital bitstream present, Plug n Play will revert to the analog audio (left and right) inputs using the default audio mode.

This receiver includes four audio listening modes; mono, stereo, surround and DVD-audio. Each input (14 inputs) may be configured for each audio mode (3 audio modes), plus the DVD-Audio mode. The receiver will store audio preferences for each audio mode resulting in a one touch solution for recalling specific settings for various types of multi-media formats. For normal operation, the Setup Inputs preferences should be configured for the "favorite" (default) setting for each input. Occasionally, you may want to change the audio mode or speaker selection being used with an input. To quickly change the audio mode simply select Mono, Stereo, Surround or DVD Audio via the remote control or the front panel Mode button. In addition, you may choose an audio listening mode immediately followed by a speaker selection. For example pressing STEREO-7 will select 7 speaker stereo mode. Pressing SURR - 5 will select 5 speaker surround. If you are listening to a 2-channel bitstream, you may change the surround decoder (Dolby Pro Logic IIx or DTS Neo:6) and the operating mode of the surround decoder (Movie, Music, Game) using the corresponding buttons on the remote.

Audio Mode Usage

MONO - The audio signals are summed or down-mixed to produce a single mono channel which may then be distributed evenly to the desired number of speakers. It is also useful in the case of a large listening group when it is difficult to put everyone near the optimum listening position. To quickly recall the mono mode from the remote control, press the MONO button then the number of desired speakers 0-9.

STEREO - The unmodified Left and right audio signals are evenly distributed to the desired number of left and right speakers. The center channel speaker receives a mono mix. Use this mode for true stereo listening or for expanding the stereo image to additional speakers. To quickly recall the stereo mode from the remote control, press the STER button then the number of desired speakers 0-9.

SURROUND - This mode is used to extract multi-channel surround information from a 2-channel audio source using one of the two available surround decoder types (DTS NEO:6 & Dolby Pro Logic IIx). To quickly recall a surround mode from the remote control, press the PLIIx or NEO:6 button then the number of desired speakers 0-9. Movie, music and game modes may be selected using their own discrete IR command buttons.

You have a choice of two methods for simulating multi-channel sound from a two channel source - Dolby Pro Logic IIx and DTS Neo:6. These decoders use different formulas for creating the simulated multi-channel sound field. Each decoder type provides a MOVIE and a MUSIC mode. MOVIE places greater emphasis on the back speakers and MUSIC places greater emphasis on the surrounds. Dolby Pro Logic IIx and DTS provide an adjustable MUSIC mode. MUSIC mode adjustments are for the center image (width), surround image (dimension), and front-to-surround image (panorama). IMG + / -, DIM + / - and PAN + / - buttons may be set under Audio Preferences to adjust the various parameters for how the surround field is created. Movie mode is fixed and has no audio adjustment options.

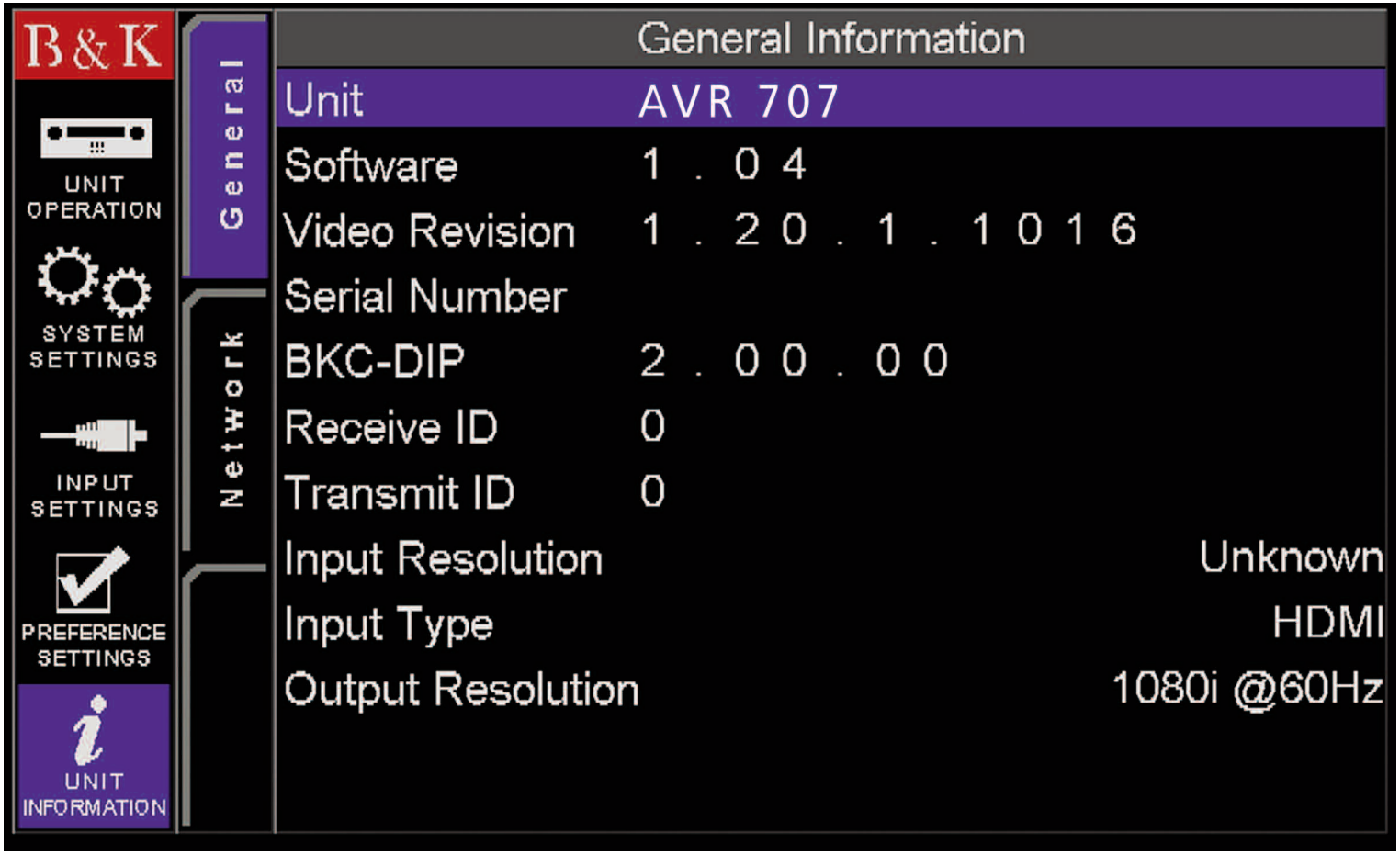
Material correctly mixed for Dolby Pro Logic contains no bass information in the surround channels and therefore, Dolby requires that no surround bass is mixed to the subwoofer when you have small surrounds. However, many video game systems do end up with bass information in the surrounds. In order to prevent loss of this bass information, PLIIx also provides GAME mode. GAME mode is otherwise identical to the MOVIE mode. NEO:6 has no such requirements on surround bass - surround bass is allowed to be mixed to the sub regardless of the mode selected. NEO:6 has no GAME mode.

The Surround mode is also used for multi-channel encoded bitstreams such as Dolby Digital and DTS. Selecting SURROUND-5 passes the 5 main channels unmodified to the fronts, center, and surround speakers. Surround-6 engages Dolby Digital Surround EX or DTS Surround ES processing. Dolby Digital EX must be selected manually. Both of these processes extract monophonic information from the surrounds and places it in the back speaker(s). This is effective for material that has been mixed specifically for EX/ES, but may drastically reduce surround information for material that is not specifically mixed for 6-channels. Dolby provides a variation of Pro Logic IIx for processing surround and back channels for 5.1 material to make 7.1. Press SURROUND-7 to access this mode. Back speakers will contain 2 independent channels (stereo backs).

SURROUND-7 is the recommended mode for 5.1 material played back in seven channels. Upon detection of a DTS bitstream, the receiver will default to FIVE speakers. If it is desired play back a DTS 5.1 bitstream in more than five channels, the selection must be configured manually. DTS also provides two variations for 6.1 material; DTS-ES Matrix (MTX) and DTS-ES Discrete. DTS-ES Matrix (MTX) is specifically mixed to provide a single matrix surround back channel. The receiver will automatically select SURROUND-6 for ES MTX material with the same surround back information in both back channels (mono). DTS-ES Discrete (DSC) provides a completely independent discrete back channel. The receiver will automatically select SURROUND 6 for ES DSC material.

Multi-channel Analog - Use this audio mode with the analog outputs of a Blu-Ray-Ray player or any other 5.1 or 7.1 analog audio source device. The Multi-channel analog input may be assigned to any input IN 1 - IN 14 and set for use with a 5.1 or 7.1 device. To quickly recall the DVD-Audio mode from the remote control, press the DVD-A button. Currently, no equalization or Lip-Sync correction is applied while set to use the DVD Audio input. *Please see www.bkcomp.com for updates, when available.*

Multi-channel PCM - Use this audio mode with the HDMI outputs of a Blu-Ray-Ray player or SACD 5.1 or 7.1 audio source device. The Multi-channel PCM or SACD may be selected simply by selecting the DVD-Audio mode while listening to an HDMI source capable of reproducing Multi-Channel PCM or SACD content (see the specific players users manual and disc software title for further details). From the remote control, press the DVD-A button. Currently, no equalization or Lip-Sync correction is applied while set to use the DVD Audio input. *Please see www.bkcomp.com for updates, when available.*


B&K
UNIT OPERATION
SYSTEM SETTINGS
INPUT SETTINGS
PREFERENCE SETTINGS
UNIT INFORMATION
General
Network
General Information
Unit AVR 707
Software 1.04
Video Revision 1.20.1.1016
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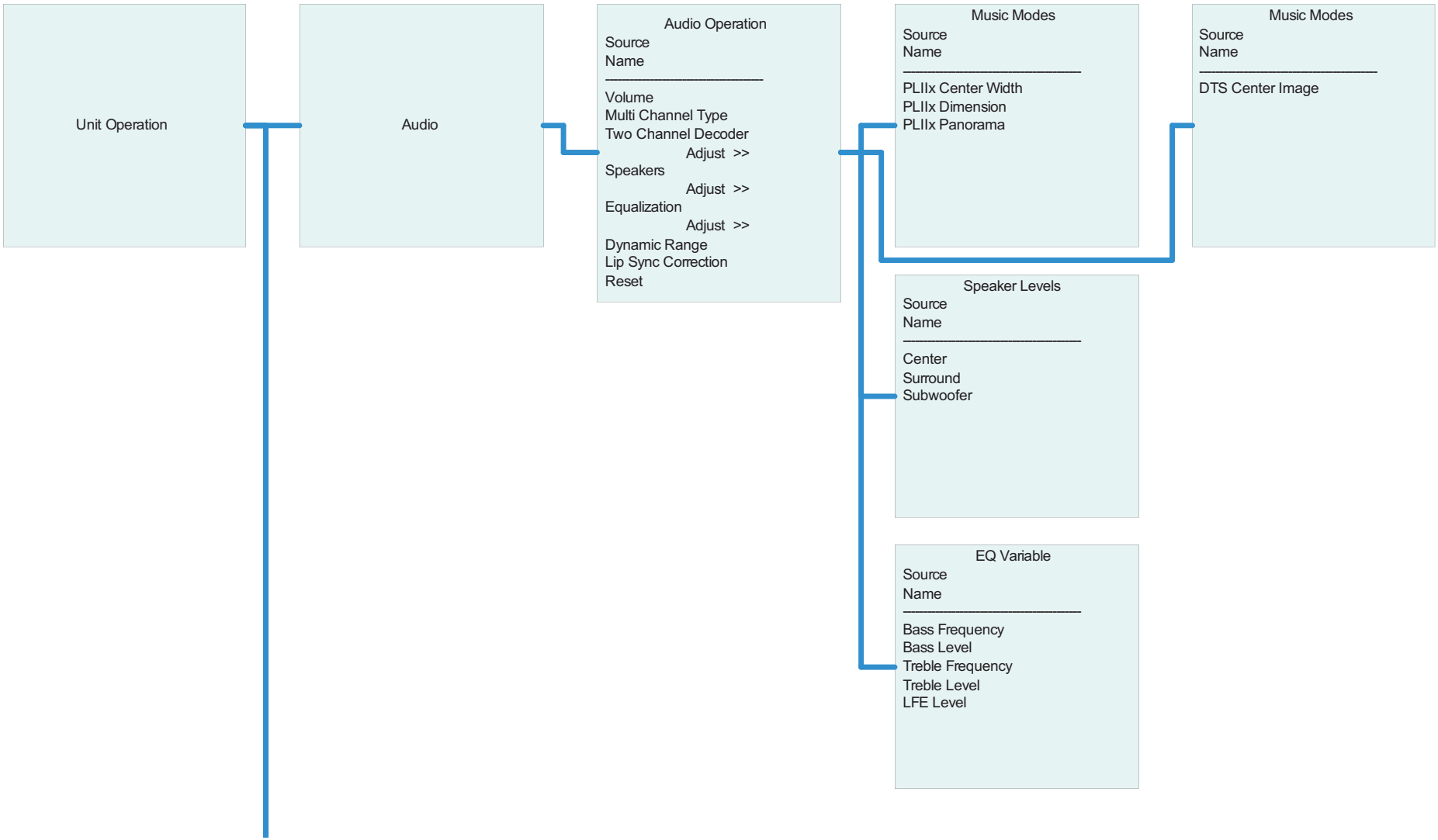
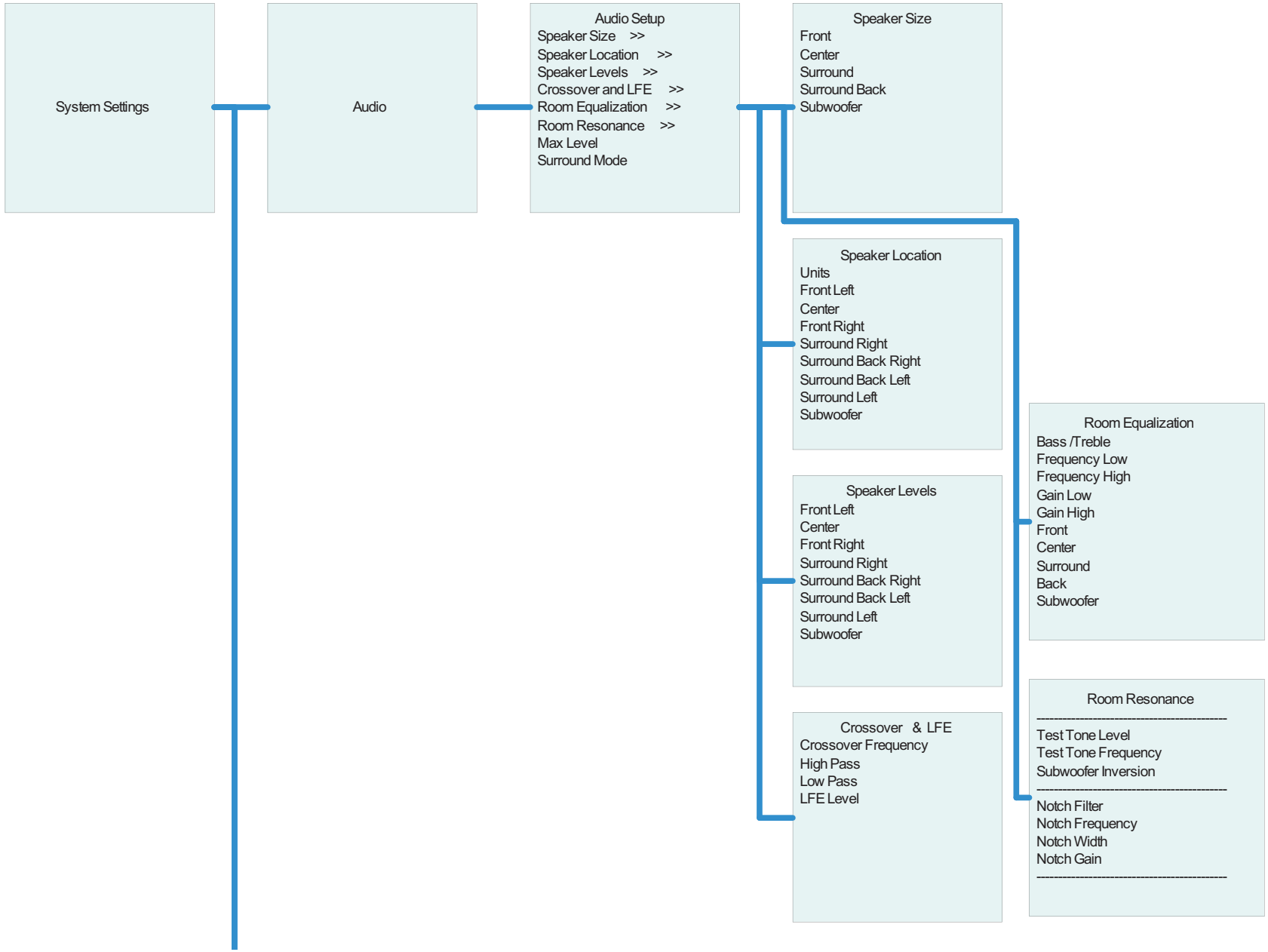
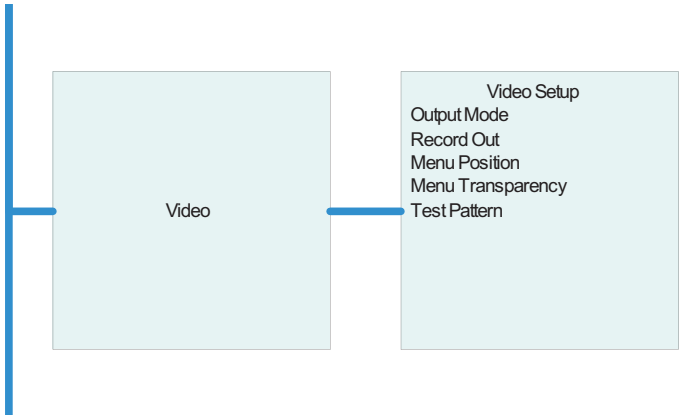
OSD - Unit Operation - Audio



OSD - Unit Operation - Video & Tuner

OSD - System Settings - Audio

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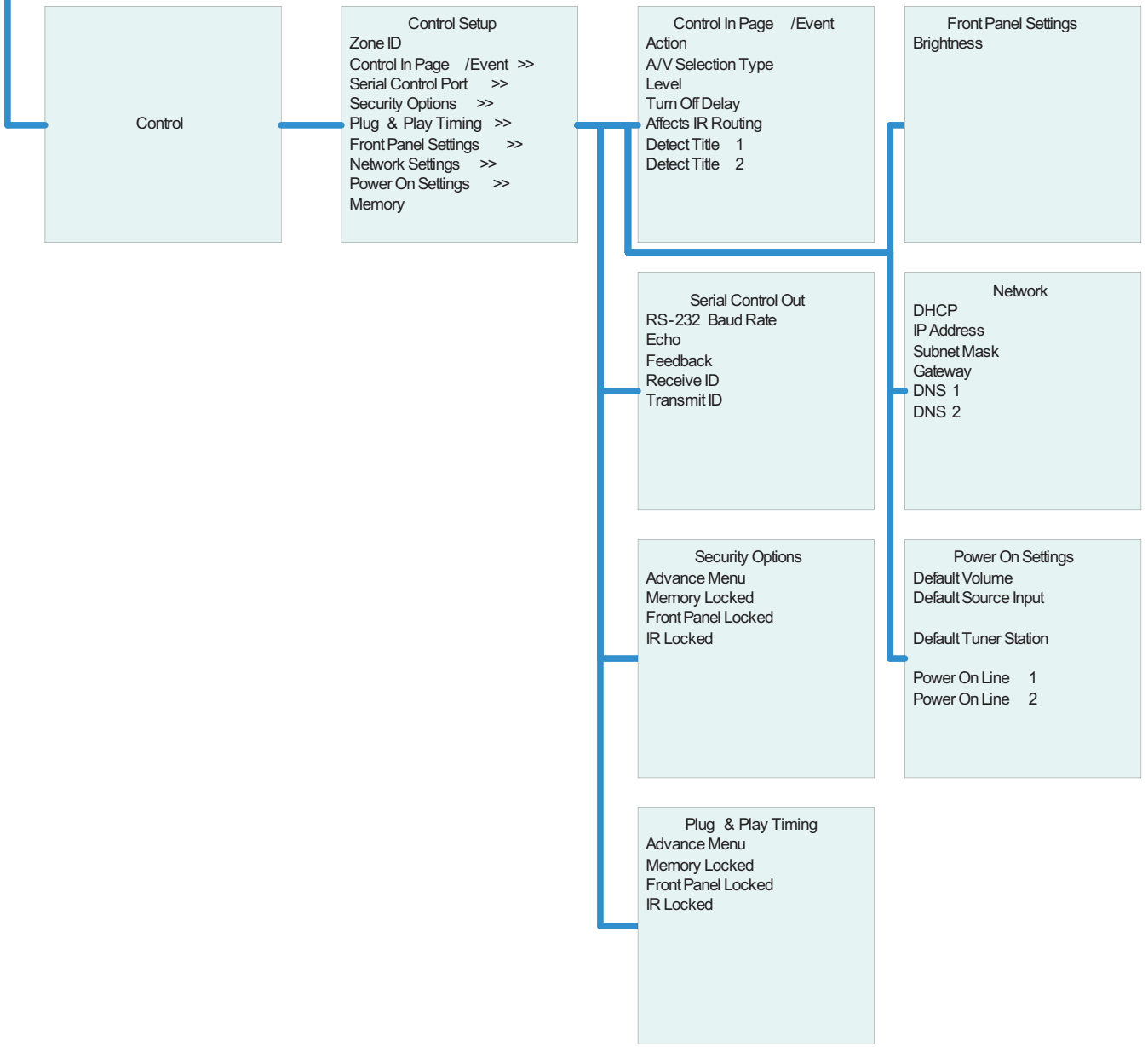
Video Setup
Output Mode
Record Out
Menu Position
Menu Transparency
Test Pattern

OSD - System Settings - Control



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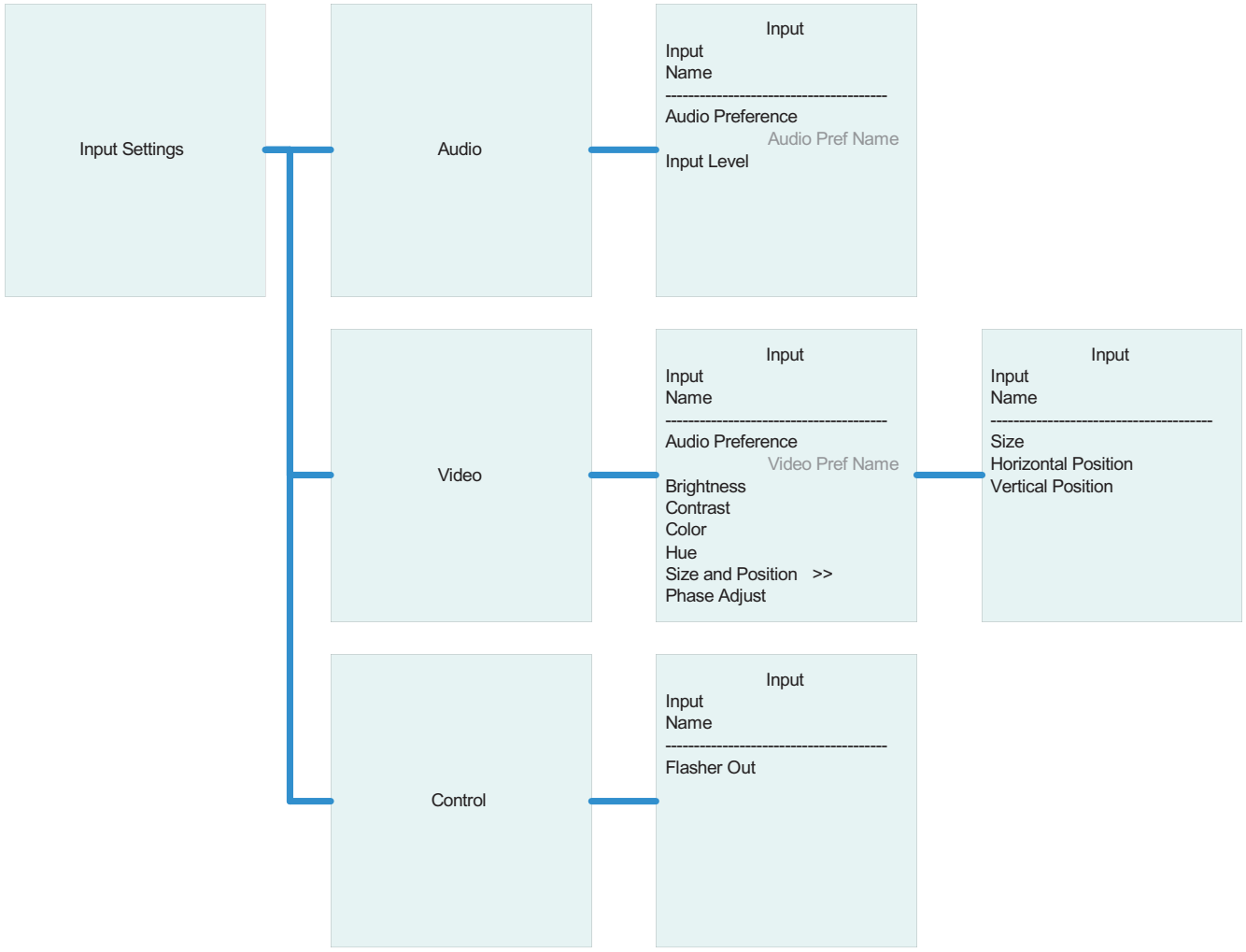

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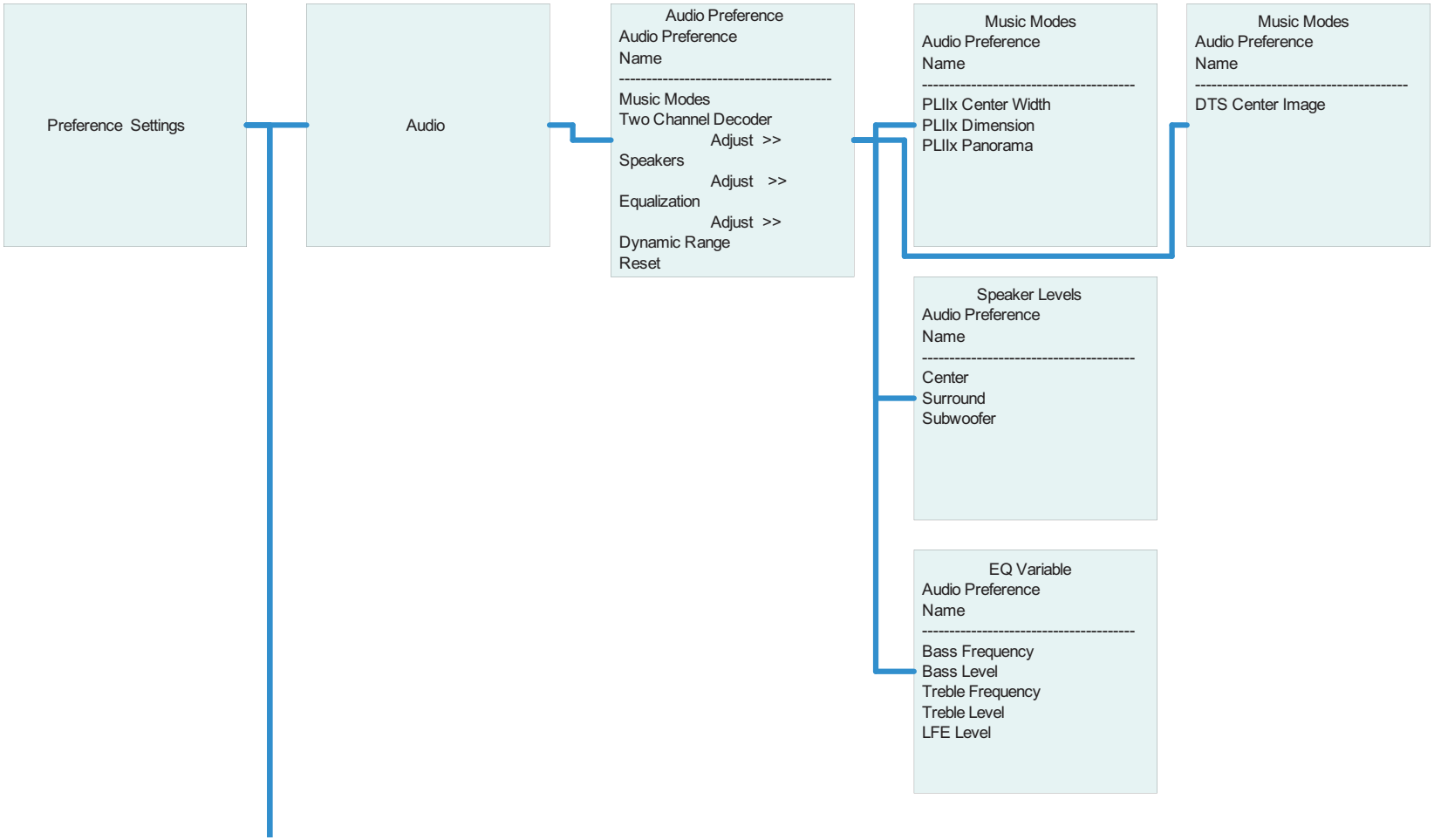
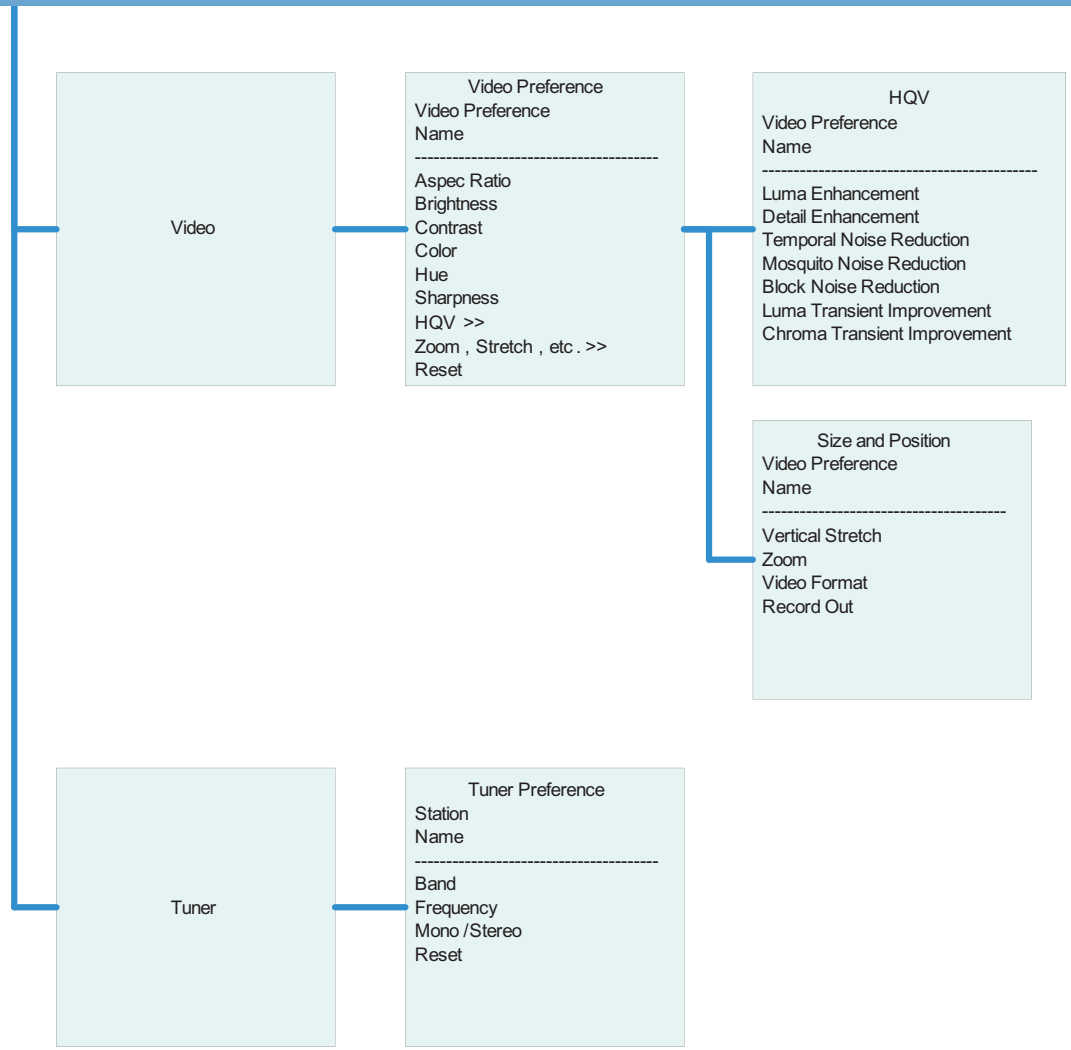
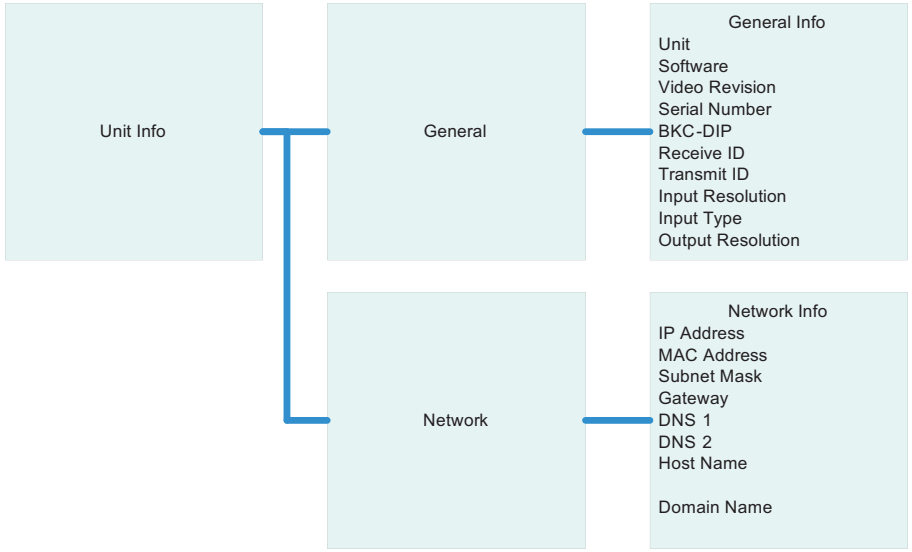


OSD - Preference Settings - Video & Tuner



OSD - Unit Information



B&K Tool Suite may be installed using the CD-ROM included with the Receiver. The SR 10.1 Editing Program and Flash Download Update programs are also included on the CD-ROM. You may also obtain this software at www.bkcomp.com. Your PC should be equipped with a CD-ROM or DVD-ROM. B&K Tool Suite includes software for setting up B & K Receivers, Preamplifiers, SR10.1 remote, and CK1.2/CK 1.1/CK2.2 Keypads. The Flash Download Update is the program used to update the software in the HD6, CT 600.3, CT 600.1, CT 300.3, Reference 70, AVR 705 and AVR 707.

The default installation path for BKcSuite is [c:/program files/B&K Components Ltd/BKcSuite.exe]

***- PC requirements - 128MB RAM, Pentium grade or better processor, Windows XP is the recommended operating system. (Exception- BKcSuite not supported on Windows NT) ***

PC - Hardware Connections

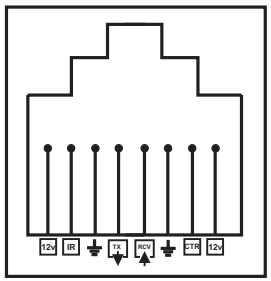
Serial Connection

Note that many modern laptops do not come equipped with a DB-9 style serial port. If your computer only has a USB style serial port, you'll need to obtain a USB to DB-9 Serial port adapter cable.

Plug one end of a RJ-45 terminated straight through CAT-5 cable into the serial communications port on the back of the computer using the serial DB-9 to RJ-45 Adapter. Plug the other end of the RJ-45 terminated cable into the RS-232 I/O port on the CT Receiver. Once your COM settings are determined, configure the B&K Suite and B&K Editors for simple and easy setup.

B&K offers a pre-made connector suitable for connecting a serial port to a standard network CAT-5 cable with RJ-45 connectors (p/n 13290). However, if you wish to make your own, the pin configuration for a RJ-45 is:

DB9	DB25	Function	RJ45 Connection
Pin 3	Pin 2	Host Transmit	To RJ45 Red
Pin 2	Pin 3	Host Receive	To RJ45 Green
Pin 5	Pin 7	Host Ground	To RJ45 Black



12v 12VDC Power Supply
Signal/Common Ground
TX RS-232 Host Transmit
RCV RS-232 Host Receive
IR IR Input
CTR 12VDC Control Output

Ethernet Communication

Connection Instructions

1 Make sure that all devices are powered off, including the B&K, Router, PCs, switches, etc.

2 Connect one end of an Ethernet network cable to one of the numbered ports on the back of the Router. Connect the other end to the Ethernet port on the B&K. Repeat this step to connect more PCs or other network devices to the Router. Power the router as needed.

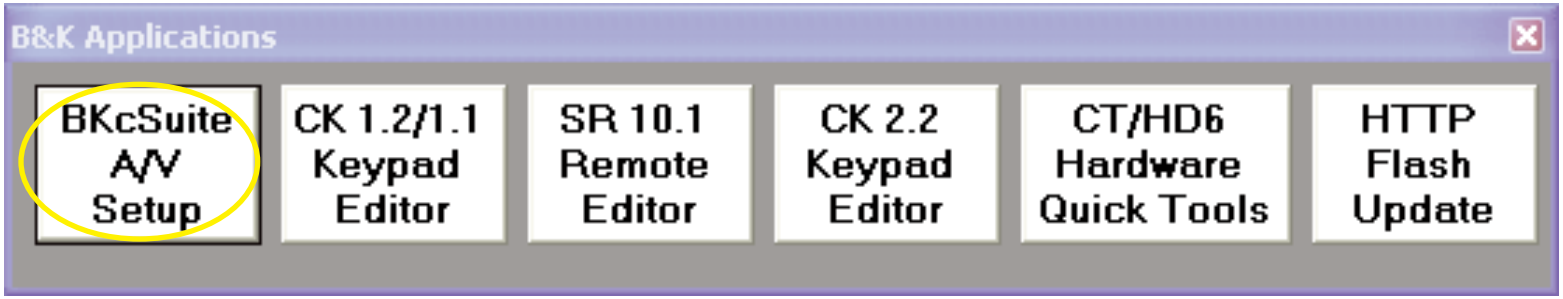
3 Connect your cable or DSL modem's Ethernet cable to the Router's Internet port. Power on the cable or DSL modem, B&K product, router, etc.

4 Power on your PC(s). Open the necessary B&K programs and either configure or control the AVR 707.

Connecting and using the Virtual Mode

BKTask automatically installs a shortcut icon on the desktop [BKTask icon (grey)]. Make sure all other applications which use the serial port are closed before opening the taskbar. B&K has the capability to connect in real-time (live) to any of our receivers or preamplifiers. However, it is recommended that all setup be done virtually to avoid system errors. Once the setup files have been created, connect to the unit and open the saved files. Typical PC setup should follow the described procedure:

1. DO NOT CONNECT UNIT TO COMPUTER. This is considered virtual mode. Open BKcSuite A/V Setup from BKTask.



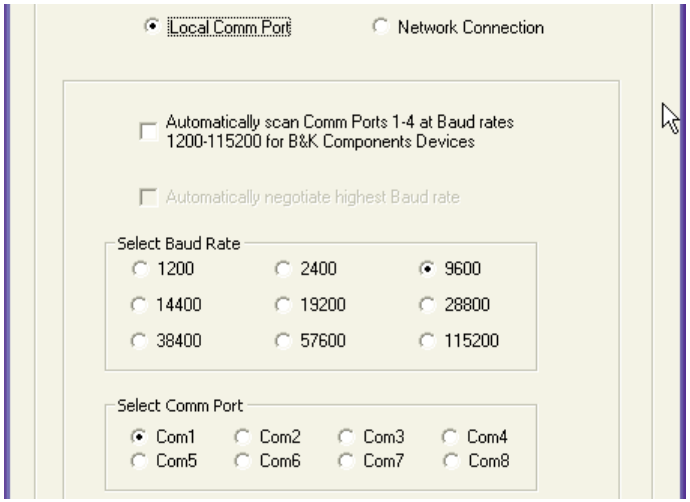
2. When Tool Suite is first opened, the Device Investigator automatically scans to find a connected B&K product. Choose “select product for operation without a connected device.”

Device Investigator
B&K
SIMPLY BETTER!
No Device Found
Try device scan again (check cables, verify unit power is on)
Manually configure Comm Port and Baud Rate
Connect to device via BK Server network connection
Select Product for operation without a connected device
Ethernet Connection
OK
Quit

3. Select the product you wish to work with. Shown the the virtual product set to AVR 707.

4. Create and save the system setup file using the Advanced Setup menu of BKcSuite.

5. Either let the program automatically scan com ports 1 through 4 at all baud rates or manually configure the com port and baud rate settings as shown below.

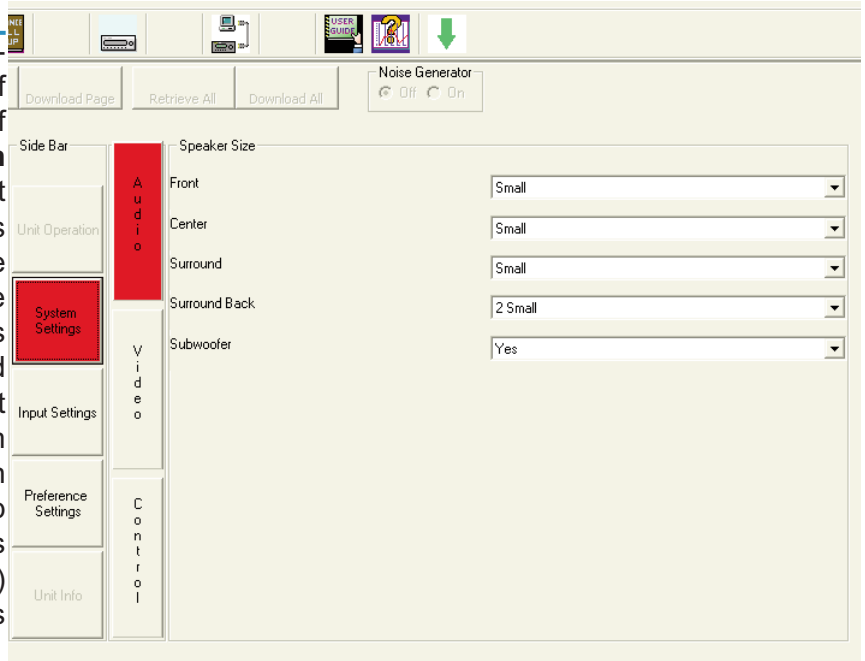


6. Connect the PC to the B&K product and run the device investigator. The unit will be found and connection will be established.

7. Once a live connection has been established, open the file previously created. Once the file is opened, it will overwrite the settings in the B&K product with the settings configured in the setup file.

Note: *While a live connection is established with a receiver or preamplifier, any changes made in BKcSuite will not immediately update inside the unit itself until Download ALL or Download Page is selected. The system file should be saved on your computer as a backup. System settings are normally stored with a .xml file extension.*

Speaker Size



Speaker size refers to be frequency range a speaker can handle. Audio material, particularly Dolby Digital and DTS movies, often contain large amounts of bass. If this bass information is sent to small speakers that are incapable of reproducing bass, then this information will be lost of distorted. **Too much bass may damage small speakers.** By configuring the receiver for the correct type of speakers, all bass information will be appropriately route the speakers that are best able to reproduce it correctly. Typically bookshelf or satellite speakers are considered small. Smaller floor standing speakers with a single 8" or less woofer should also be considered small. Floor standing speakers with 10" or larger woofers, or multiple smaller woofers may be considered large. These are general guidelines only - if you are unsure, please consult your speaker manufacturer or dealer. If using large speakers then the system may not require a subwoofer, however better results may still be obtained with the use of a subwoofer. Even with speakers are capable of reproducing deep bass, better overall bass response may be obtained by setting these speakers to small. This allows bass to be reproduced from a single point (the subwoofer) and avoids the possibility of phase cancellation which may occur when bass is reproduced from multiple speakers.

Front Speakers - There must be at least 2 front speakers in order to use your receiver. Set these channels to small or large based on the guidelines described above.

Center Speaker - It is not necessary to have a center speaker. Set it to small or large based on the guidelines above. Or, if there is no center speaker set it to none. The center information will be reproduced in the front left and right speakers. No audio information is lost, however the sense of voices coming from the screen may be lost.

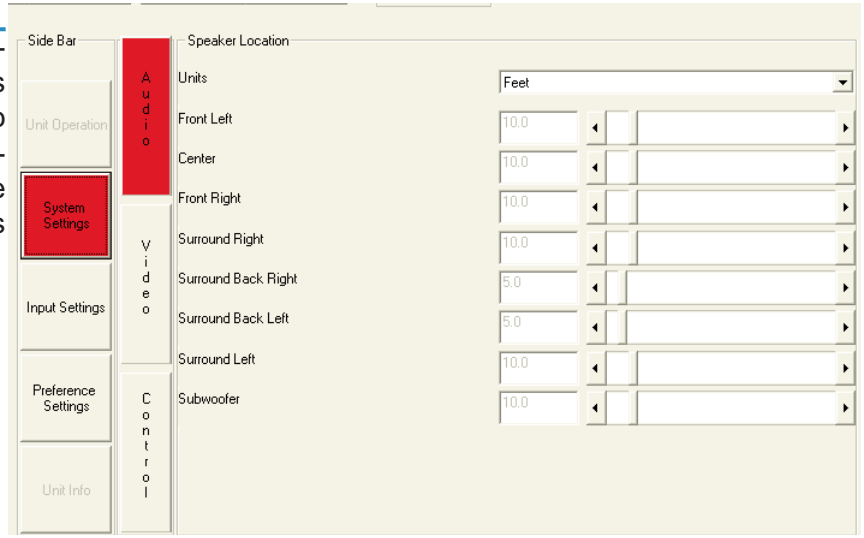
Surround Speakers - It is not necessary to have surround speakers. Set them to small or large based on the guidelines above. Or, if there are no surround speakers set them to none. The surround information will be reproduced in the front left and right speakers. No information is lost but the sense of spaciousness provided by discrete 5.1 channel sound tracks or 2 channel tracks enhanced by Dolby Pro Logic IIx or DTS Neo: 6 may be lost.

Surround Back Speakers - It is not necessary to have back speakers, however back speakers may not be used unless surround speakers are used. If the surround speakers are set to none, no options will appear for the surround back speakers. There is the option to use 1 or 2 back speakers in either large or small varieties. If set to none, the back information will be reproduced in the surround speakers and although no information is lost, the sense of sounds coming from directly behind you may be lost.

Subwoofer - There are three choices for subwoofer. If set to none, all based information including LFE (.1 channel) will be routed to any large speakers in the setup above. If there are no large speakers and no sub, the bass information will be lost. The most common setting for subwoofer is Yes. The LFE channel and bass information from any small speakers is reproduced in the sub. Bass information from large speakers is reproduced only in the large speakers, it is not sent to the sub. B&K proved a third setting called Ultra. Ultra is identical to Yes as far as LFE and small speakers, but bass information from large speakers is reproduced in large speakers AND the sub therefore allowing bass to be reproduced from multiple locations in the room.

Speaker Location

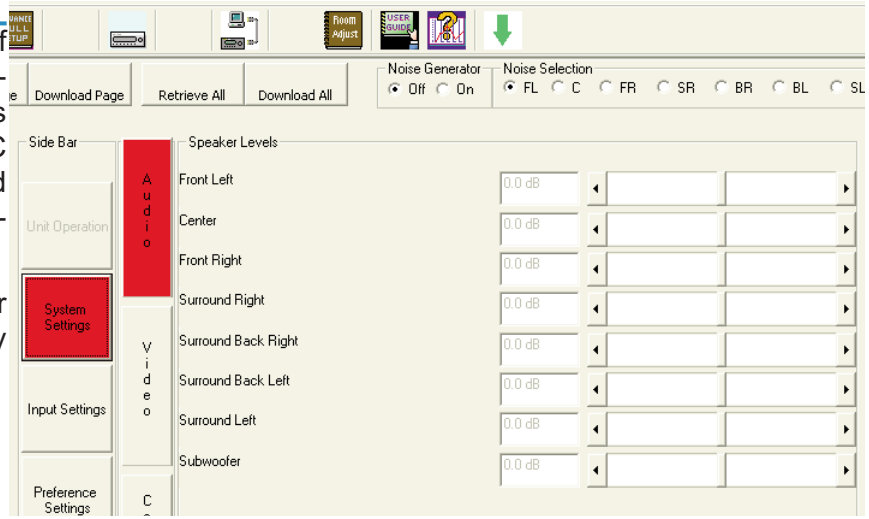
Ideally the speakers should be positioned at an equal distance from the listening position. However, physical limitations usually require placing the speakers in other than optimum locations. The surround receiver contains a means to electronically move each speaker's location. This allows for superior reproduction of the directional cues available during movie or music playback. Measure the distance in feet from your listening position to each speaker. Enter this information into BK Suite. Units may be changed to meters if preferred.



Speaker Level

Speaker level calibration will generate pink noise to allow the equalization of the volume levels of each speaker to make up for differences in speaker characteristics and distances from from the listener to the speakers. Best results will be achieved using a Sound Pressure Level (SPL) meter. Set it to C Weighting and Slow Response. Place the meter at your listening position and adjust each speaker for an equal response (An SPL of 75 dB is recommended).

Note: The tone generator and noise selection settings in BK Suite will appear once a AVR 707 is found and the Speaker Level is selected. This is the only time this option will appear.



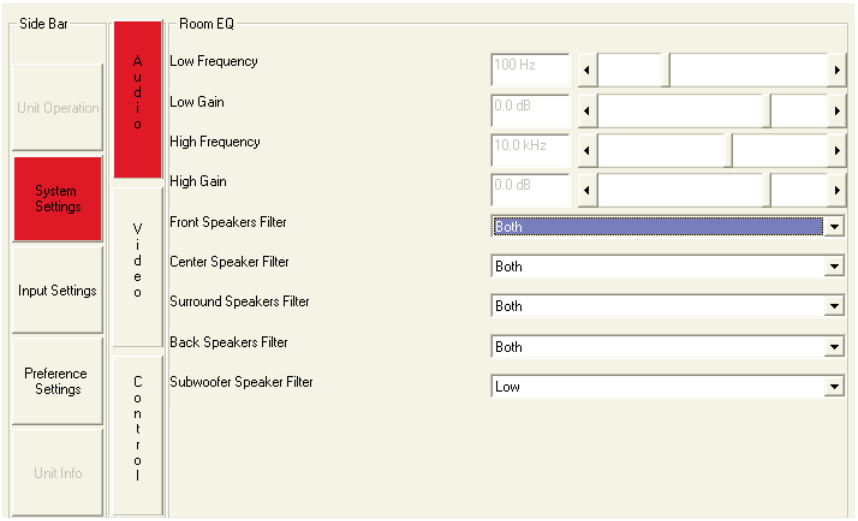
Crossover and LFE

Crossover Frequency - Sets the frequency at which bass tones are filtered from the small speaker channels and sent to the subwoofer. The crossover point is the frequency at which the amount of information in the subwoofer and main speaker(s) is equal. Set this according to the capabilities of the speakers and/or subwoofer. When speakers are set to small, the crossover and above is sent to the subwoofer. When the subwoofer is set to Yes or Ultra, the crossover and below is sent to the subwoofer (except when set to None).

High Pass / Low Pass Slope - There is a gradual transition when crossing the signal from the speakers to the subwoofer. The crossover slope determines how gradual or abrupt this transition occurs (6, 12 or 24 dB). More gradual slopes generally result in a smoother transition from speakers to subwoofer. However, gradual transitions may cause distortion in small speakers due to too much bass information. The low pass slope may be set to NONE which will send full range to the subwoofer output allowing an external crossover to handle the low pass slope. If the subwoofer has an off or bypass selection for it's internal crossover, we recommend setting it to off and using the receiver's crossover.

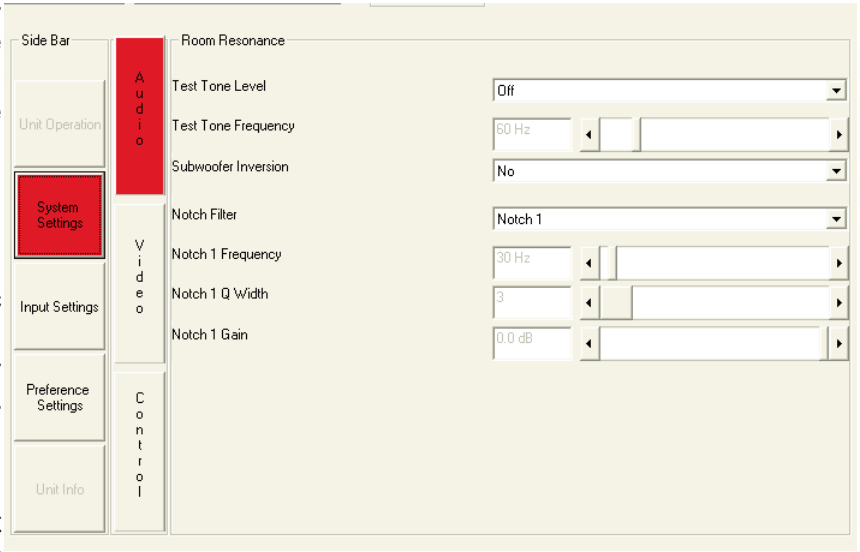
LFE Level - Used to increase or decrease the subwoofer level. The subwoofer signal may want to be increased or decreased depending on the room or installation. Usually this will be set to 0.0 dB (default). Note that this effects only the separate LFE (.1) or subwoofer channel available on source material. There is no effect on the reproduction of normal bass from the front, center, or surround channels.

Room Equalization



Sometimes it may be desirable to boost or reduce the levels above or below a certain frequency. This might be used to make up for small deficiencies in the listening room or speakers. The equalization may be applied only to certain speakers. This might be used to obtain a more consistent timbre between unmatched speakers. For example, if only the front speakers need to have frequencies above 10kHz boosted 1dB, then room equalization setup menu will be adjusted as shown right. In some home theaters the center speaker is installed behind a projection screen. The screen will tend to cut the high frequencies. Applying a high boost only to the center channel can compensate for the losses introduced by the screen. Or possibly center and front left/right speakers are behind the screen. A high boost may be applied to all three of these speakers with no effect on the surround or back speakers. Shelving equalization helps to adjust level and frequency to aid in adjusting your room for a flat frequency response. Room Equalization parameters are applied globally regardless of the selected user EQ (Variable EQ, the Loudness EQ, Cinema EQ or the Vocal EQ).

Room Resonance (Notch Filters)



No speaker has perfectly flat frequency response. These deviations in frequency response contribute to each speaker's characteristic sound. This is why one speaker might be preferred over another. When a speaker is put into a room with walls, floor and a ceiling, reflected sounds can cancel or reinforce one another which further alters the frequency response.

At higher frequencies, hundreds of small peaks and dips can be measured in the frequency response. Attempts to remove all these small deviations would result in colorations to the sound that may not be desirable. The characteristic sound that made the particular speaker(s) attractive could be completely lost. Even if the hundreds of small peaks and dips would be adjusted, it would only be correct for a single position in the room. Moving your head just a few inches would require a completely different set of corrections.

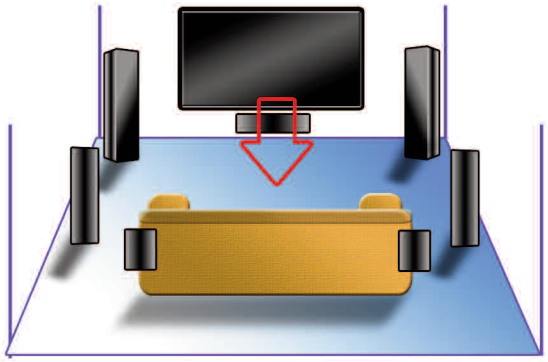
At low frequencies, the picture is different. There are fewer peaks and dips, but they are much more dramatic. The peaks and dips persist over a much larger portion of the listening area. Dips can't be corrected electronically. Putting out more power at the dip frequency won't help. If the original and reflected waves cancel each other, they will cancel at 1 watt or 1000 watts. If you have 1 watt dips in the frequency response you can try repositioning your speakers, particularly the subwoofer. Fortunately, dips in the bass response are typically not that noticeable. When an instrument plays that particular frequency, the bass is lost, but the higher harmonics of the instruments tone are still there. To some degree, your ear and brain will fill in the missing information.

See the following page to set up the notch filters.

Notch Filter Setup

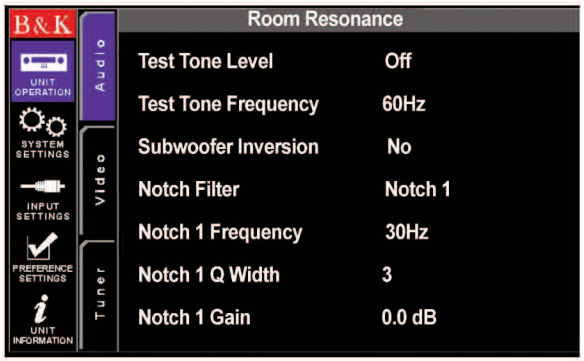
Using an SPL meter, complete the following steps in order to coordinate the notch filters.

Step 1. Find the Sweet Spot of the Room
Note: The Sweet Spot is normally in the center of the speaker setup.

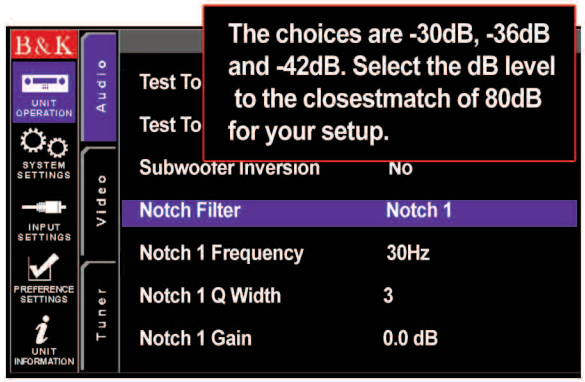


Step 2. Set up the SPL (Sound Pressure Level) Meter
Set the Range Selector to 80 dB. Set the Weighting Selector to C and the Response Selector to Slow.

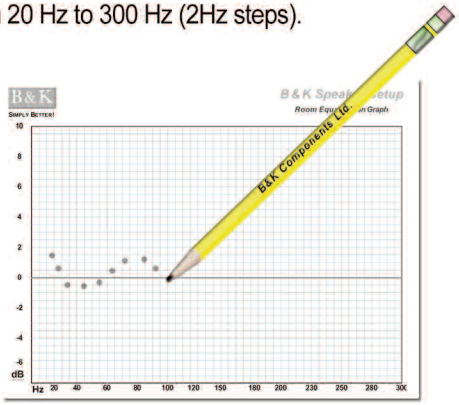
Step 3. Using the unit Menu Select System Setup ther Audio and then Room Resonance.



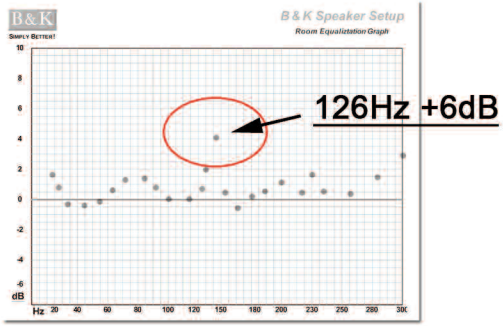
Step 4. Select the Notch Filter which you would want to configure. Select the dB level of the test tone generator.



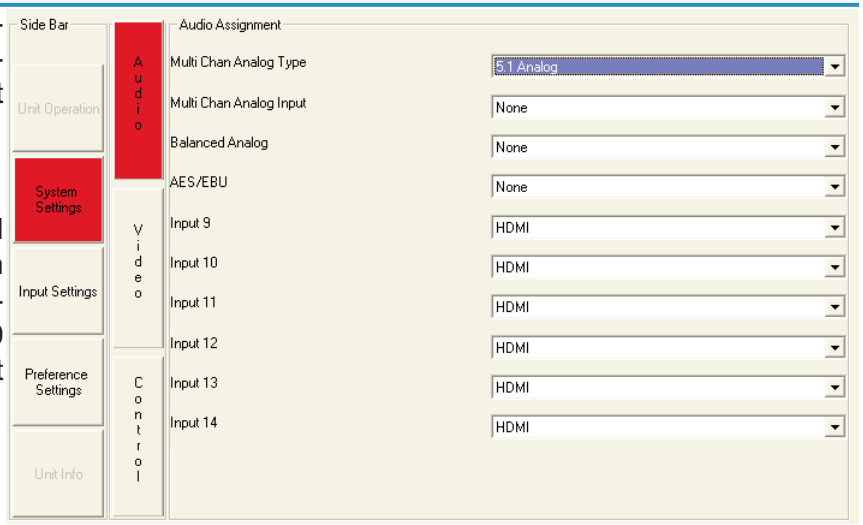
Step 5. Record the dB levels using the test tone generator and the SPL meter. Chart the frequencies from 20 Hz to 300 Hz (2Hz steps).



Step 6. Locate the highest frequency from 20 Hz to 300 Hz. Select the frequency with the highest point on the dB scale. Use the notch filter to bring the frequency down.



Audio Assignment



Multi-Channel Analog Type - Select either 5.1 or 7.1, depending on the multi-channel analog outputs on the source. If the source has 6 multi-channel analog outputs select 5.1 If the source has 8 multi-channel analog outputs select 7.1.

Multi-Channel Analog Input - The receiver provides one set of multi-channel analog inputs that may be assigned to any A/V input. When assigned to an Input 1 through 8, the audio may be switched to or from the multi-channel analog inputs using the IR or BKC-DIP Serial codes. When assigned to an Input 9 through 14, the audio may only be assigned to the multi-channel analog input through the menu.

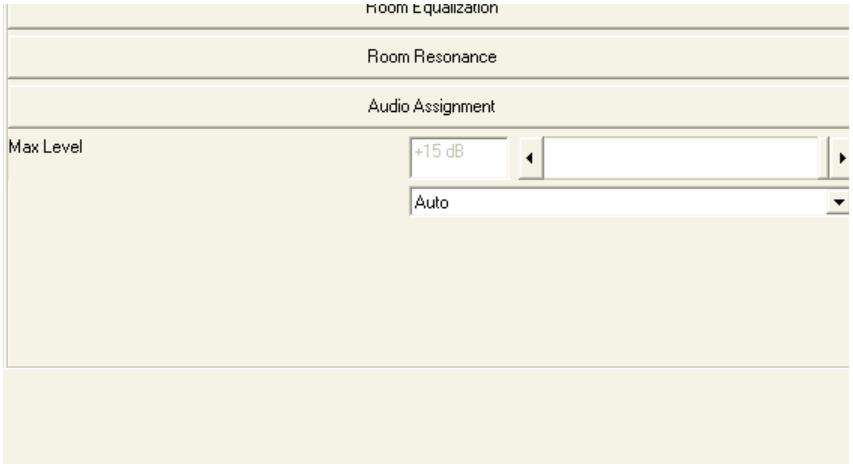
Balanced Analog - *NOT USED WITH THE AVR 707 RECEIVER.*

AES/EBU - *NOT USED WITH THE AVR 707 RECEIVER.*

Input 9 through Input 14 - Video from any HDMI input may be assigned to be linked with audio from any optical digital, coax digital or two channel analog input 1 through 9.

Max Level / Surround Mode

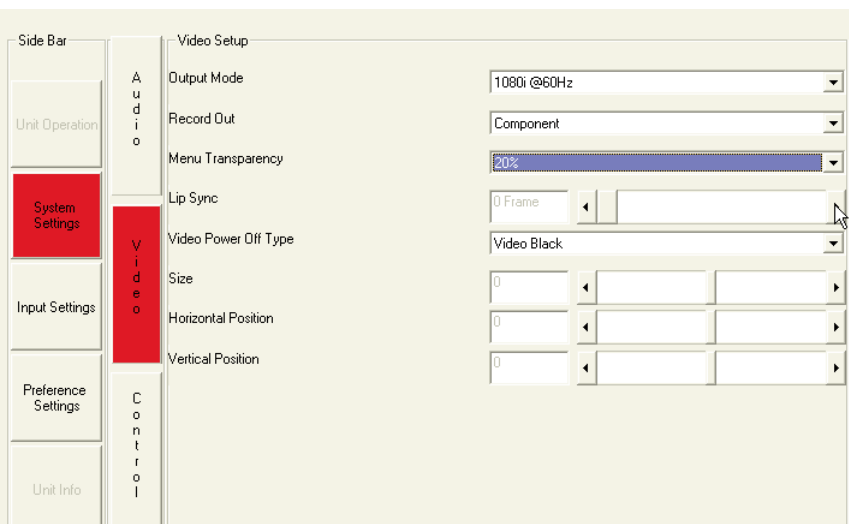
Max Level - Set to limit the maximum system volume level.



Surround Mode - Set to Auto for automatic Stereo to Movie mode changes if multi-channel 5.1 to 7.1 audio bitstreams (Dolby Digital or DTS) are detected. Set to Manual if this feature is not desired.

BKcSuite System Settings - Video

Video Settings



Output Mode - Select the native resolution of your HD television or Monitor. Note: for use with any 50Hz, 1080p60Hz or 1080p60/24Hz, ensure your Monitor supports the selected resolution as video may not be visible.

Record Out - Set to the appropriate video record device output format. Select composite / S-video for use with most DVD recorders. Select Component resolution for use with other more powerful video recorders.

Menu Transparency - Set to the desired opacity for use with OSD menu overlays and video pop up messages i.e. volume status.

Lip Sync - Set this to correct for the native Lip-Sync delay of the connected video monitor. One video frame is approximately 17mS delay. Modern HD monitors may have up to 5 frames of delay.

Video Power Off Type - Set this to off when it is desired to not output video while the receiver is in the sleep / standby mode. This allows an attached video monitor with video signal sensing to to turn itself On / Off automatically. Set to black if it is desired to blank all video while in sleep.

Size - Set to compensate for the connected monitors video over or under scan.

Horizontal Position - Set to compensate for the connected monitors horizontal left or right shift.

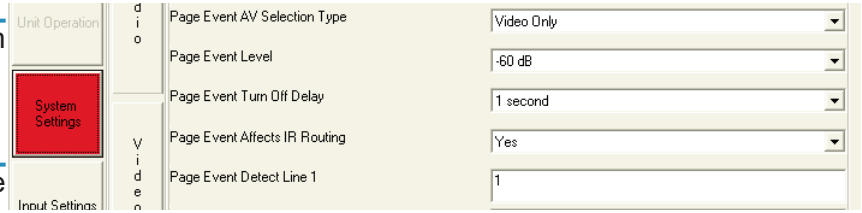
Vertical Position - Set to compensate for the connected monitors vertical up or down shift.

Note: Horizontal and Vertical position parameters are only valid for correction when the “Size” correction adjustment is set to less than or greater than 0.

Zone ID

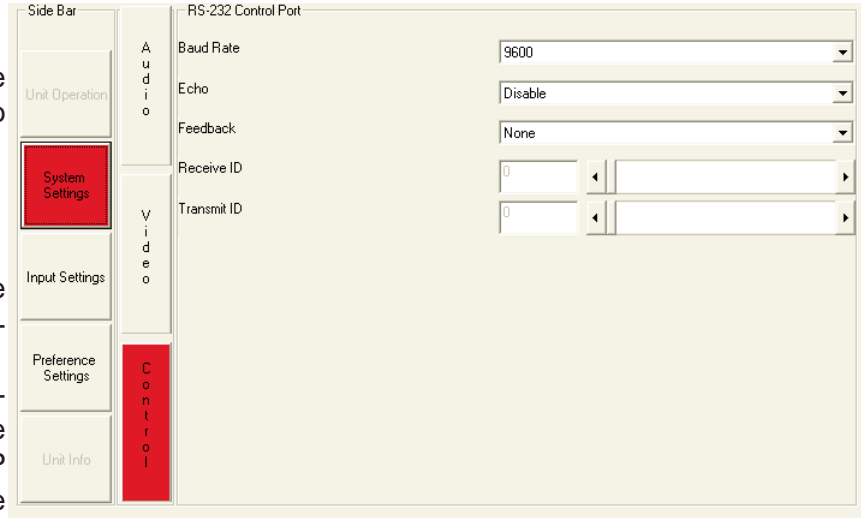
The product ID (IR code set) may be adjusted if operation with other B&K products is required. The default ID is 001 for the AVR 707. The receiver may be assigned to any ID (B&K code set) between 001 and 127. This allows different B&K surround processors to operate independently using different remote controls. This feature is typically useful if multiple pieces of B&K equipment are used in the same system (including B&K CT whole house audio systems). Code set 000 “whole house” operates all B&K equipment simultaneously.

Control In / Page Event



Control In - Parameters useful for interface to door bell and or security system interfaces.

RS-232 Control Port



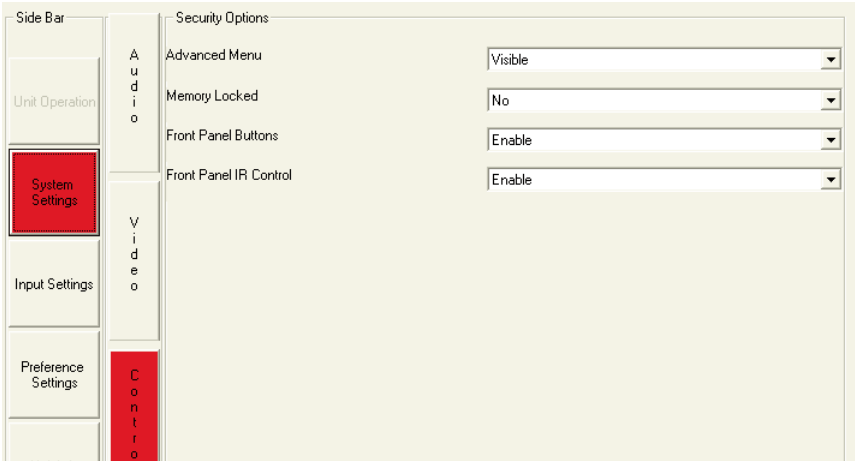
Baud Rate - B&K does not recommend using any baud rate other than 9600. The default baud rate is 9600. When other baud rates are used, keypad feedback status and keypad synchronization might be lost.

RS-232 Echo Enabled - This setting is used when external control systems are connected to B&K product via any serial port, RS-232, Ethernet or USB. The echo will repeat any serial BKC-DIP transmission received through a serial I/O port.

RS-232 Feedback Selection (Continuous Reply) -
Disabled - (Default) - No BKC-DIP Update or Reply is generated.
Update - An Update message, which represents the specific current state of the receiver, is sent when there is a change in a logical zone’s state. Then, the receiver must be polled to determine the current status.
Reply - When feedback selection set to “REPLY”, the unit will automatically generate BKC-DIP reply messages to allow unsolicited continuous feedback to the external controller. Whenever a change is executed in a logical zone, a BKC-DIP reply message will automatically be generated. The reply message represents the new state of the affected logical zone. I.e. System change to Volume, Bass, Treble, EQ, Source and/or Tuner Frequency.
Both - Outputs both BKC-DIP Update and BKC-DIP Reply message.

RS-232 Receive & Transmit ID - Used in sophisticated configurations such as Serial Macros, the Receive and Transmit ID in B&K RS-232 protocol allows B&K product to “listen” (receive ID) or “talk” (transmit ID) to other B&K products. The programmer may need to change the identifier when external automation systems need to control more than one B&K product. For instance, if you need to send a CT receiver an IR triggered RS-232 macro (to power off the CT) from a AVR 707, you should set the Transmit ID of the AVR 707 to 1 and the Receive ID of the CT to 1, and set the Transmit of the CT to 0 and the Receive ID of the AVR 707 to 0.
Note - If you change the Receive or Transmit ID, it does not affect the setup in BKcSuite.

Security Options



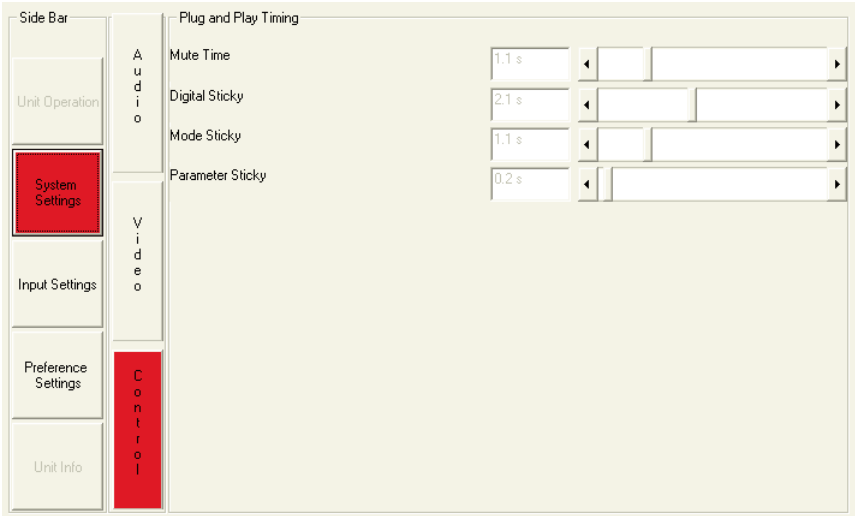
Front Panel Buttons - When you disable the front panel buttons, the only button that still has any affect is the master power On/Off button. A touch of any other button brings the word “Locked” to the display.

Memory Locked - This will prevent the user from saving any changes to presets or system settings.

Setup Advanced Menu - If set to Hidden, the user may not access the setup menu.

Rear Panel IR Control - This sets the unit as to whether the 1/8” mini-jack ‘IR IN’ is enabled or not.

Plug and Play Timing



Plug and play timing pertains to the internal delays associated with the Plug n Play audio detection system. **Do not adjust these parameters unless there is a problem detecting audio.**

The receiver has default audio Plug n Play settings that work with the majority of A/V sources and digital audio bitstreams. However, with the introduction of new A/V products into the market place, these Plug n Play audio detection parameters may need to be adjusted to improve upon the listening experience. Changing the plug and play timing would adjust the mute timing of the audio before you hear pops and clicks when there is a digital audio bitstream error. Although your receiver’s muting circuitry may stop most of the digital errors from being heard, it does not guarantee that a digital error may never be heard.

The Plug n Play menu may be used to adjust mute times while the receiver is automatically switching between different types of digital audio formats (AC3 5.1 / DTS 5.0 / DTS 5.1, PCM). Usually these audio pops and snaps may be traced to a digital error on the incoming digital audio bitstream and corrected with a simple Mute Time adjustment.

Mute Time - 1.0 Sets the mute time for use with invalid digital audio information. In addition it is used to mute when a digital signal first appears or changes modes.
Digital Sticky - 2.5 Only applies to changes from any digital audio mode back to analog. This parameter may be set long because most Cable and SAT receivers drop the digital audio bitstream when changing channels and there is really no need to revert back to analog.
Mode Sticky - 0.1 Only applies to changes from AC3 or DTS to PCM. Many DVD players drop to PCM when skipping tracks.
Parameters Sticky - 0.1 Applies to how quickly the receiver will react to changes in sample rate, number of speaker channels in the bitstream, etc. Setting this parameter longer reduces the chance that the receiver will respond to an erroneous change but does increases the likelihood of muting the audio at the start of an audio playback.

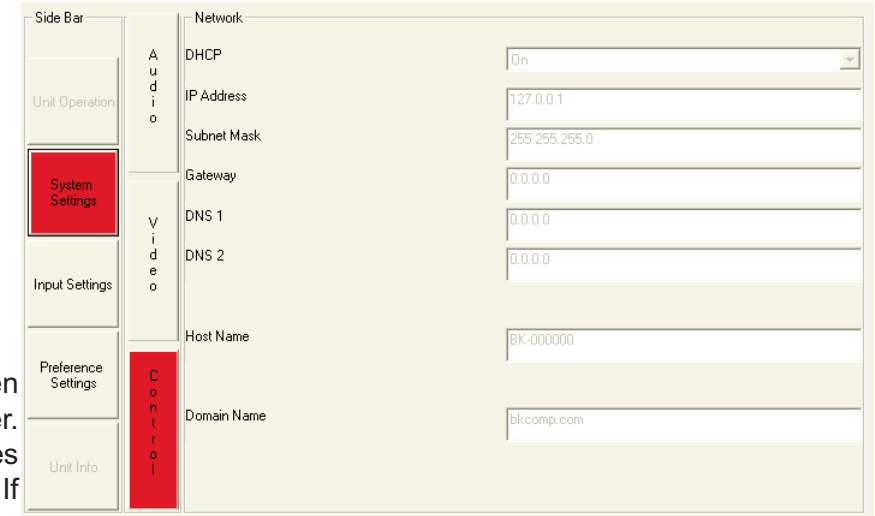
BKcSuite System Settings - Control

Front Panel Settings

Adjusts the intensity of the front panel display. may be set to either High, Medium, Low or Off. Default is set to High.

Network Settings

MAC Address - Ethernet transport layer number for a device and is unique for each network device.



DHCP - Dynamic Host Configuration Protocol

Off - Use static IP address

On - Get IP from DHCP

Repair - Request new host address

IP Address - Local device address. The unit IP is obtained from DHCP when DHCP is on. The IP will be assigned be a DHCP service - typically a router. Note: When no DHCP server is available and DHCP is set to on the B&K uses a Link-local address of 169.254.x.y where x and y are random numbers. If DHCP is set to Off you must set a static IP manually.

Subnet Mask - Unit Subnet Mask is assigned by the DHCP server.

If the DHCP is set to Off (static) optionally manually assign the Subnet Mask.

Gateway - Optionally a DHCP server may assign the Gateway IP Address.

If the DHCP is set to Off (static) optionally manually assign the Gateway.

DNS 1 - Optionally a DHCP server may assign the Primary DNS (domain name server).

If the DHCP is set to Off (static) optionally manually assign DNS 1.

DNS 2 - Optionally a DHCP may assign the Second DNS (domain name server).

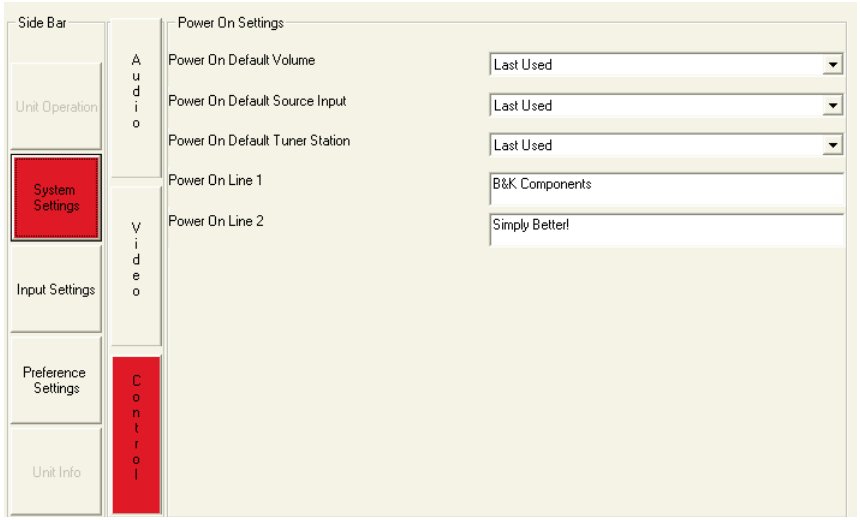
If the DHCP is set to Off (static) optionally manually assign DNS 2.

Host Name - String containing Host Name --- (DHCP Option 15). The unit defaults to BK- “the Serial Number”. i.e. BK-123456

Domain Name - String containing Domain Name --- (DHCP Option 15). The unit defaults to null.

Power On Settings

Set the Power On Preferences for the Volume, Source Input, Tuner Station and the Power On OSD Display titles.

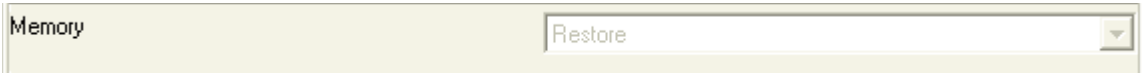


Last Used - When powered on, the unit will return to its' last used state. For example, if the source input was set to In 1 when powered off, the zone will power on with the source from In 1.

Power On Preference - The receiver will power on to the selected setting. Specific volumes or input sources, radio stations or titles may be chosen for use with the power-on preferences.

Memory

This menu allows a backup to be made of all the customized settings that have been made to the AVR 707. The options in this selection are backup, restore, or reset. Even if a backup is not made, any customized settings will not be lost during normal day to day operation. It is a good idea to create a backup once all the settings have been made.



Backup - All system settings on the receiver will be stored on the EEPROM.

Restore - Recall the system settings that were stored during the previous Backup

Reset - All system settings will be reset back to factory default. **Note:** A factory reset will erase all prior system backups.

BKcSuite Input Settings - Audio

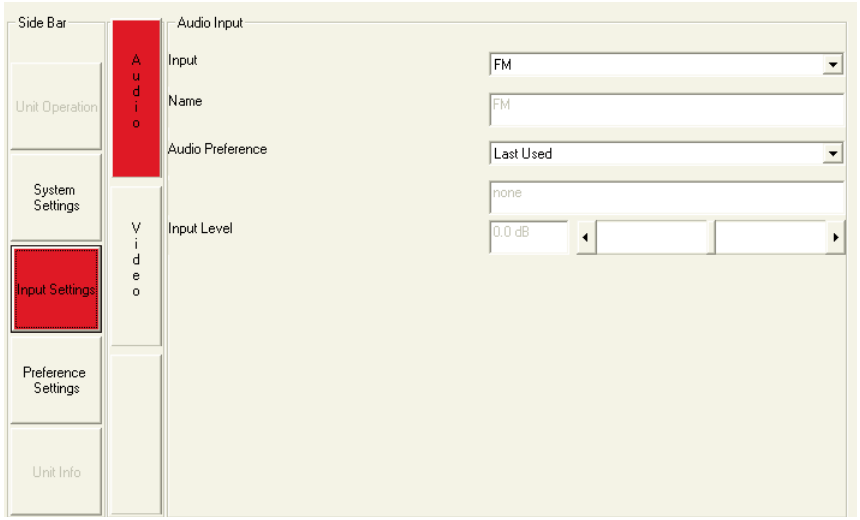
Audio Input

Input - Each audio input device AM, FM, IN 1 - IN 14 has attributes that may associated for use whenever the input is selected. Select the desired input and use the below settings for use in the audio system.

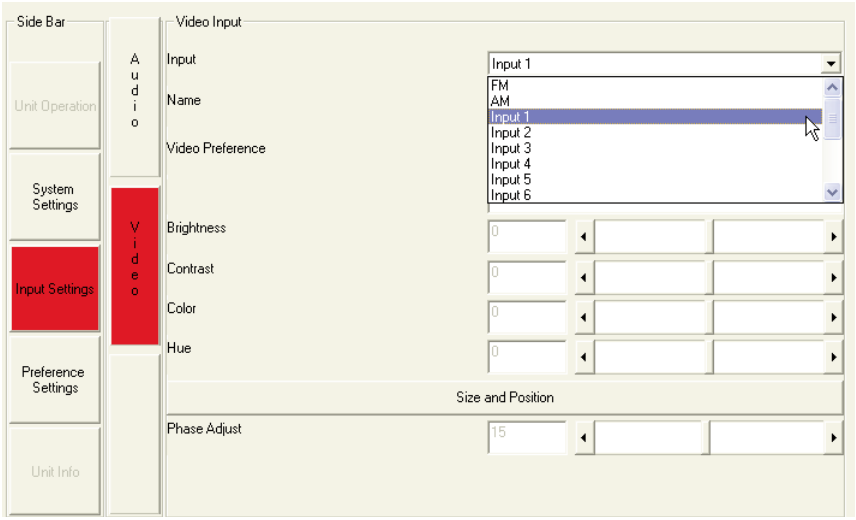
Name - Type the desired 5 character source input name.

Audio Preference - Select the Audio Preference (0 - 9) that will be automatically associated for recall whenever it is selected for use. Select Last Used if it is desired to leave all audio settings in the “present state” when an input is selected. *See Preference Settings Audio.*

Input Level - Select the amount of gain or attenuation desired to best match listening levels with the other source devices.



Video Input



Input - Each video input device IN 1 - IN 14 has attributes that may associated for use whenever the input is selected. Select the desired input and use the below settings for use in the video system.

Name - Type the desired 5 character source input name.

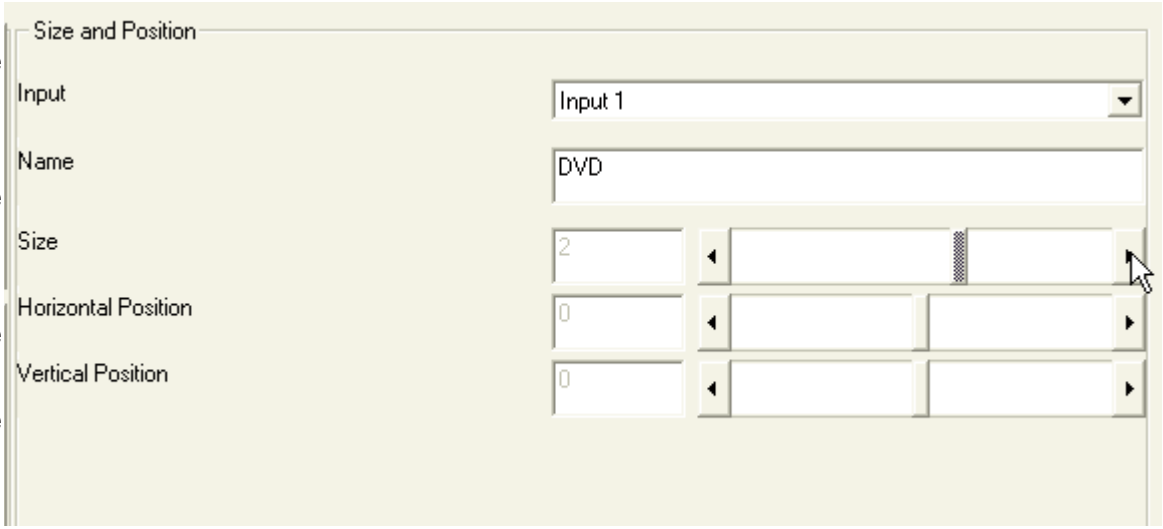
Video Preference - Select the Video Preference (0 - 9) that will be automatically associated for recall whenever it is selected for use. Select Last Used if it is desired to leave all video settings in the "present state" when an input is selected. *See Preference Settings Video*.

Brightness - Select the amount of white level correction, boost or cut, that is needed for proper video calibration of the selected source.

Contrast - Select the amount of black level correction, boost or cut, that is needed for proper video calibration of the selected source.

Color - Select the amount color gain, boost or cut, that is needed for proper video calibration of the selected source.

Hue - Select the amount color tilt, boost or cut, that is needed for proper video calibration of the selected source.



Size and Position - Set to compensate for a source device video over or under scan.

Horizontal Position - Set to compensate for a source device horizontal left or right shift.

Vertical Position - Set to compensate for a source device vertical up or down shift.

Note: Horizontal and Vertical position parameters are only valid for correction when the "Size" correction adjustment is set to less than or greater than 0.

Phase Adjust - For use with analog video inputs IN 1 to IN 8, adjust phase so that the selected source device video is both sharp, detailed and has the least amount of flicker.

Audio Preference Guide

Audio Pref	Name	Audio Mode	Audio Type	Dolby / DTS	# of Spkrs	Speaker Level	EQ Type	Variable EQ Level	Cinema Filter	Dynamic Range
0		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
1		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
2		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
3		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
4		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
5		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
6		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
7		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
8		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced
9		Mono DPLIIx Stereo DTS Neo:6 DVD-Audio	Movie Music Game	DTS Ctr. Img. _____ Dolby Ctr. Width _____ Dolby Dimens. _____ Dolby Panora. _____		Center _____ Rear _____ Sub _____	Flat / None Variable Loudness Vocal	Bass Freq. _____ Bass Level _____ Treble Freq. _____ Treble Level _____	Off On	Normal Reduced

Video Preference Guide

Video Pref	Name	Aspect Ratio	Details	HQV	Size	Video Format	Record Out
0		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
1		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
2		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
3		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
4		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
5		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
6		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
7		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
8		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On
9		None Pillar Box Stretch Zoom Wide	Contrast _____ Brightness _____ Color _____ Hue _____ Sharpness _____	Luma En. _____ Detail _____ Block Noise _____ Temporal _____ Luma Tr. _____ Mosquito _____ Chroma Tr. _____	Stretch _____ Zoom _____	Auto Freq. _____ Res. _____	Off On

Tuner Preference

Station	Name	Band	Freq.	Stereo/ Mono
0.		AM FM		Stereo Mono
1.		AM FM		Stereo Mono
2.		AM FM		Stereo Mono
3.		AM FM		Stereo Mono
4.		AM FM		Stereo Mono
5.		AM FM		Stereo Mono
6.		AM FM		Stereo Mono
7.		AM FM		Stereo Mono
8.		AM FM		Stereo Mono
9.		AM FM		Stereo Mono

Station	Name	Band	Freq.	Stereo/ Mono
10.		AM FM		Stereo Mono
11.		AM FM		Stereo Mono
12.		AM FM		Stereo Mono
13.		AM FM		Stereo Mono
14.		AM FM		Stereo Mono
15.		AM FM		Stereo Mono
16.		AM FM		Stereo Mono
17.		AM FM		Stereo Mono
18.		AM FM		Stereo Mono
19.		AM FM		Stereo Mono

Station	Name	Band	Freq.	Stereo/ Mono
20.		AM FM		Stereo Mono
21.		AM FM		Stereo Mono
22.		AM FM		Stereo Mono
23.		AM FM		Stereo Mono
24.		AM FM		Stereo Mono
25.		AM FM		Stereo Mono
26.		AM FM		Stereo Mono
27.		AM FM		Stereo Mono
28.		AM FM		Stereo Mono
29.		AM FM		Stereo Mono

Station	Name	Band	Freq.	Stereo/ Mono
30.		AM FM		Stereo Mono
31.		AM FM		Stereo Mono
32.		AM FM		Stereo Mono
23.		AM FM		Stereo Mono
34.		AM FM		Stereo Mono
35.		AM FM		Stereo Mono
36.		AM FM		Stereo Mono
37.		AM FM		Stereo Mono
38.		AM FM		Stereo Mono
39.		AM FM		Stereo Mono

Updating Firmware

Instruction for Uploading New Firmware

For use with your B&K Components Ltd. Receiver

1 Please visit out website (www.bkcomp.com) for detailed information regarding B&K available software, firmware, and downloads.
2 Please log on to the firmware download section by following the specified instructions.
3 Please review the available downloads, bug fixes, and added new features.

For use with Televisions and Monitors

1 Please register your HDTV on the specific manufactures website.
2 Please check the Manufacturers website for detailed information regarding available software, firmware, and download.
3 Please review the available downloads, bug fixes, and added new features.
4 Please follow the instructions on the website for their specific model for downloading the new firmware and for loading the firmware into the TV or Monitor.

For use with Input Sources

1 Please register your Source Device on the specific manufactures website.
2 Please check the Manufacturers website for detailed information regarding available software, firmware, and download.
3 Please review the available downloads, bug fixes, and added new features.
4 Please follow the instructions on the website for their specific model for downloading the new firmware and for loading the firmware into the device.

Specifications

Specification		AVR 707	AVR 705
Receiver Surround Outputs		7.1 RCA Type	
Surround Sound Processing		Dolby Digital / Dolby Pro Logic IIx / Dolby Digital Surround-EX DTS / DTS-ES Discrete / NEO:6	
Frequency Response		20 - 20kHz	
Total Harmonic Distortion THD (S + N)		0.09 % 20 - 20 kHz	
Surround Processor Type		Freescale DSP 56371 (upgradable)	
Input Sensitivity		90 mV	
Signal to Noise Ratio		92 dB unbalanced RCA	
Input Impedance		10 kΩ	
Output Impedance		221 Ω	
Maximum Output Level		3V RMS	
User Presets		10 Video / 10 Audio / 40 Tuner	
Audio / Video Source Inputs		14 (6 HDMI)	
Speaker Outputs / Power / Band		7 x 125 Watts / 5 - 45 kHz	5 x 125 Watts / 5 - 45 kHz
Digital Coax / Optical Audio Inputs		8 Coax / 8 Optical / 1AES-EBU	
CK1.1 / 2.2 Keypad Compatible		Yes	
Multi-channel Analog Inputs		5.1/ 7.1 (assignable)	
Tape Record Loop Outputs		Yes	
RS-232 / Ethernet Controllable		Yes	
AC Line Voltage		120 / 220 / 240 VAC (optional / switchable)	
Control Outputs		Two 10 - 12VDC triggers @ 100mA	
Dimensions in Inches (Cutout Dimensions)	Width Height Depth	17” (17.12) 7.50” (7.62) 16.19” (17.5)	
Shipping Weight		55 lbs.	
Power Consumption		950 Watts	
Replacement Fuses		AC Line - 12 Amp / 250 Volt Fast Blow	

Specifications

Tuner Specifications		
Specification	**FM Section**	**AM Section**
Frequency Range	87.5 - 107.9 MHz	520 - 1670 kHz
Total Harmonic Distortion	Less than 0.25%	Less than 0.3%
Frequency Response	20 Hz - 15 kHz	300 Hz - 3kHz
IHF (Usable) Sensitivity	12 dBf	28 dBf
Alternate Chan. Selectivity	65 dB	30 dB
Signal to Noise Ratio	70 dB	50 dB
Antenna Input Impedance	75 Ω	300 Ω
Mono/Stereo Sensitivity	15 / 35 dBf	N/A
Capture Ratio	2 dB	N/A

Video Specifications	
Frequency Response Composite / S-Video	20 Hz - 10 MHz
Frequency Response Component Video	10 Hz - 75 MHz
Input & Output Impedance	75 Ω / 75 Ω
Composite / S-Video / Component - Inputs / Outputs	8 / 2 (Component)
HDMI Inputs / Outputs	6 / 1
Max. Input / Output - Composite / S-Video / Component Video	2V RMS into 75 Ω
Video Processing	Silicon Optix Reon V200
HDMI Specifications	1.3b Compliant